RIVERSIDE COUNTY
PLANNING DEPARTMENT

John Hildebrand
Planning Director

MITIGATED NEGATIVE DECLARATION

Project/Case Number: TTM38605, CZ230004, APD240004

Based on the Initial Study, it has been determined that the proposed project, subject to the proposed mitigation measures, will not have a significant effect upon the environment.

PROJECT DESCRIPTION, LOCATION, AND MITIGATION MEASURES REQUIRED TO AVOID POTENTIALLY SIGNIFICANT EFFECTS. (see Environmental Assessment and Conditions of Approval)

COMPLETED/REVIEWED BY:

By: Russell Brady Title: Project Planner Date: September 11, 2024

Applicant/Project Sponsor: Mitch Adkison Date Submitted: April 6, 2023

ADOPTED BY: Board of Supervisors

Person Verifying Adoption: _____ Date: _____

The Mitigated Negative Declaration may be examined, along with documents referenced in the initial study, if any, at:

Riverside County Planning Department 4080 Lemon Street, 12th Floor, Riverside, CA 92501

For additional information, please contact Russell Brady at (951) 955-3025.

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Please charge deposit fee case#:

FOR COUNTY CLERK'S USE ONLY

COUNTY OF RIVERSIDE
ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY

Environmental Assessment (CEQ / EA) Number: N/A
Project Case Type (s) and Number(s): CZ2300004, TTM38605, AGN00175, AGN00176, APD240004
Lead Agency Name: County of Riverside Planning Department
Address: 4080 Lemon Street 12th Floor, Riverside, CA 92501
Contact Person: Russell Brady
Telephone Number: 951-955-3025
Applicant's Name: Adkan Engineers
Applicant's Address: 6879 Airport Drive, Riverside, CA 92504
Final Hearing Body (DH/PC/BOS):
Final (Date Adopted by Hearing Body):

I. PROJECT INFORMATION

A. Project Description:

Regional Setting

The 95.96-acre Project site is located within the western portion of unincorporated Riverside County, California. Figure 1-1, as shown below, depicts the Project site's location within the regional vicinity. As shown, Riverside County abuts San Bernardino County to the north; Orange County to the west; and San Diego and Imperial Counties to the south. Riverside County is located in an urbanizing area of southern California commonly referred to as the Inland Empire. The Inland Empire is an approximate 28,000 square-mile region comprising western San Bernardino County, western Riverside County, and the eastern reaches of Los Angeles County.

Project Location and Setting

As depicted on Figure 1-2, shown below, the Project site is located within the Vitoria Grove community of the Lake Mathews/Woodcrest Area Plan (LMWAP) of unincorporated Riverside County. More specifically, the 95.96-acre Project site as depicted on Figure 1-3, shown below, is located north of El Sobrante Road, east of McAllister Street, and west/southwest of Travertine Drive. Under existing conditions, the Project site is vacant and undeveloped. Under existing conditions, the Project site generally is surrounded by vacant land, agricultural uses, residential uses, and commercial uses.

Proposed Project

The Project as evaluated herein consists of applications for a Change of Zone (CZ 2300004), Tentative Tract Map (TTM 38605), two Notices of Non-Renewal (AGN 00175 and AGN 00176) and an Agricultural Preserve Diminishment (APD 240004) for a 95.96-acre property located east of McAllister Street and north of El Sobrante Road in the Victora Grove community of the Lake Mathews/Woodcrest Area Plan (LMWAP) portion of unincorporated Riverside County. Collectively, approval of these discretionary actions would allow for the development of the Project site with 163 single-family detached residential units on minimum 10,000 square-foot (s.f.) lots on approximately 50.39 acres; a park sites on a total of approximately 2.7 acres; three detention/water quality basins on approximately 10.3 acres; slopes and open space on approximately 14.5 acres; and private internal roadways on approximately 18.1 acres. Access to the Project site would be accommodated via a proposed off-site roadway, Street A. Street A would connect to El Sobrante Road south of the Project's boundary, then would extend northerly through the western portions of the Project site, and would connect to Travertine Road near the Projects northwestern boundary by means of an emergency vehicle access easement.

This Environmental Assessment analyzes the physical effects associated with all components of the proposed Project, including planning, construction, and ongoing operation. The governmental approvals requested from Riverside County to implement the Project consist of the following:

- Adoption by ordinance of a Change of Zone (CZ2300004);
- Adoption by resolution of Tentative Tract Map No. 38605 (TTM 38605);
- Adoption by resolution of Agricultural Preserve Diminishment and Cancellation No. 240004 (APD 240004; El Sobrante 1);
- and Certification of this Environmental Assessment.

The Project's applications, as submitted to the County of Riverside by the Project Applicant, are herein incorporated by reference pursuant to State CEQA Guidelines § 15150 and are available for review at the Riverside County Planning Department, 4080 Lemon Street, 12th Floor, Riverside, CA 92501. All other discretionary and administrative approvals that would be required of the County of Riverside or other government agencies also are within the scope of the Project analyzed in this Environmental Assessment.

Change of Zone No. 2300004 The zone change proposed by the Project would amend the zoning classification of parcels 270-070-005,270-070-006, 270-070-007 and 270-160-005 (95.96 acres total) from A-1-10 (Light Agriculture) to R-1 (One-family dwellings).

Tentative Tract Map No. 38605 proposes to subdivide approximately 95.96 acres (gross) of the Project site to allow for the development of a residential community with ancillary recreational and open space land uses. The TTM would establish a subdivision of 163 residential lots (totaling 50.39 acres of residential uses) while the remaining 45.57 acres are proposed for open space, parks, trails, landscape, and water quality retention basins. A depiction of Tentative Tract Map No. 38605 is shown on Figure 1-4, below.

Agricultural Preserve Diminishment

Proposed Agricultural Preserve Diminishment No. 240004 (APD240004) would remove a 67.02-acre portion of the Project site from the El Sobrante No. 1 Agricultural Preserve. APD240004 would not terminate the entire El Sobrante No. 1 Agricultural Preserve, as other properties would remain in the El Sobrante No. 1 Agricultural Preserve.

Agricultural Preserve Notices of Nonrenewal

The Project's Agricultural Preserve Notice of Nonrenewal No. 00175 (AGN 00175) and Notice of Nonrenewal No. 00176 (AGN 00176) are proposed in conformance with Government Code Chapter 7, Article 3, Section 51245. AGN 00175 applies to an existing Williamson Act Contract that encumbers a 28.63-acre portion (APN 270-160-005) of the Project site. AGN 00176 applies to an existing Williamson Act Contract that encumbers a 17.27-acre portion (APN 270-070-006) of the Project site. Discretionary approval of AGN 00175 and AGN 00176 would begin the nine- year nonrenewal process which would result in the termination of the Land Conservation Contract encumbered upon the two aforementioned parcels.

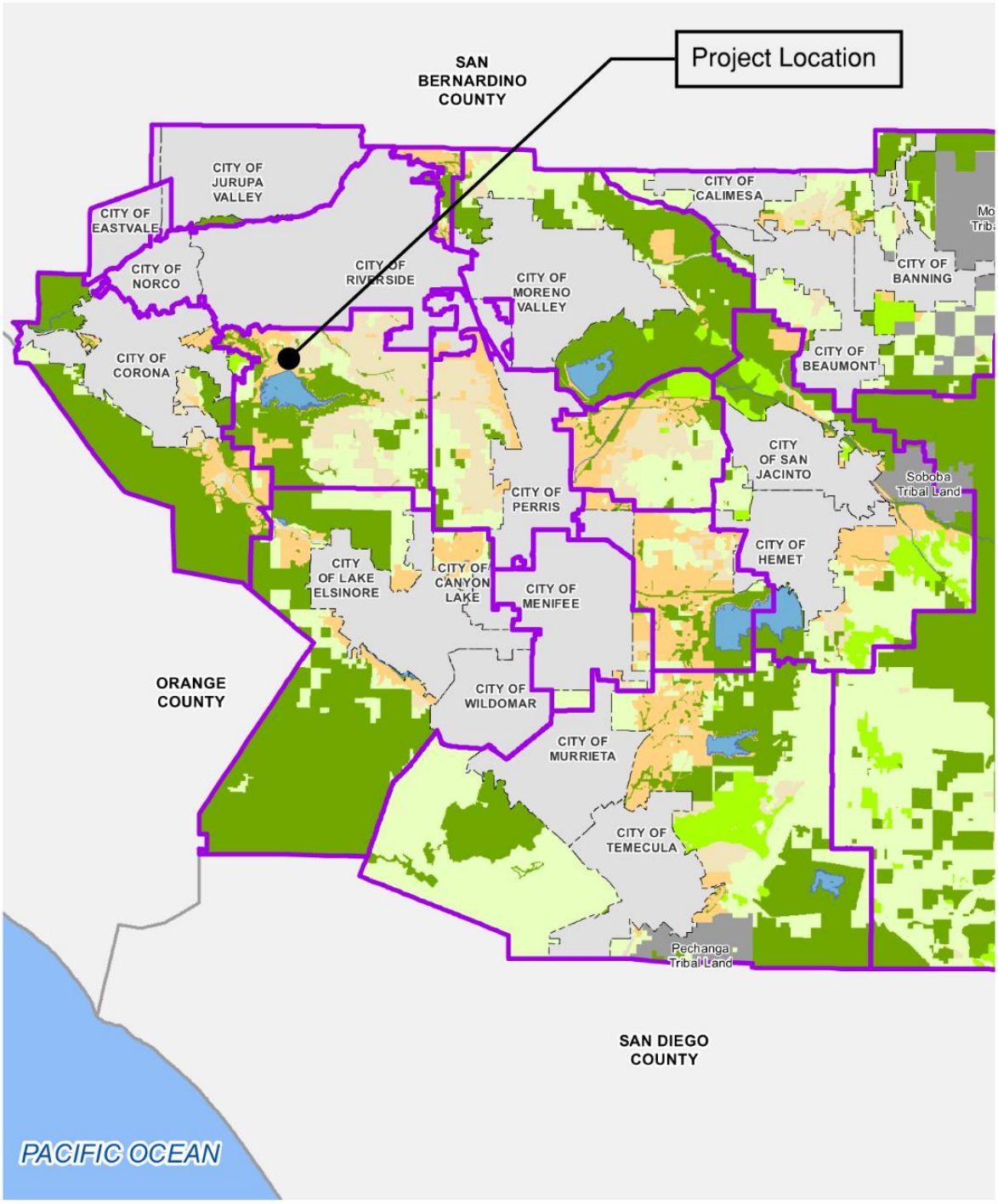


Figure 1.1 - Project Regional Location

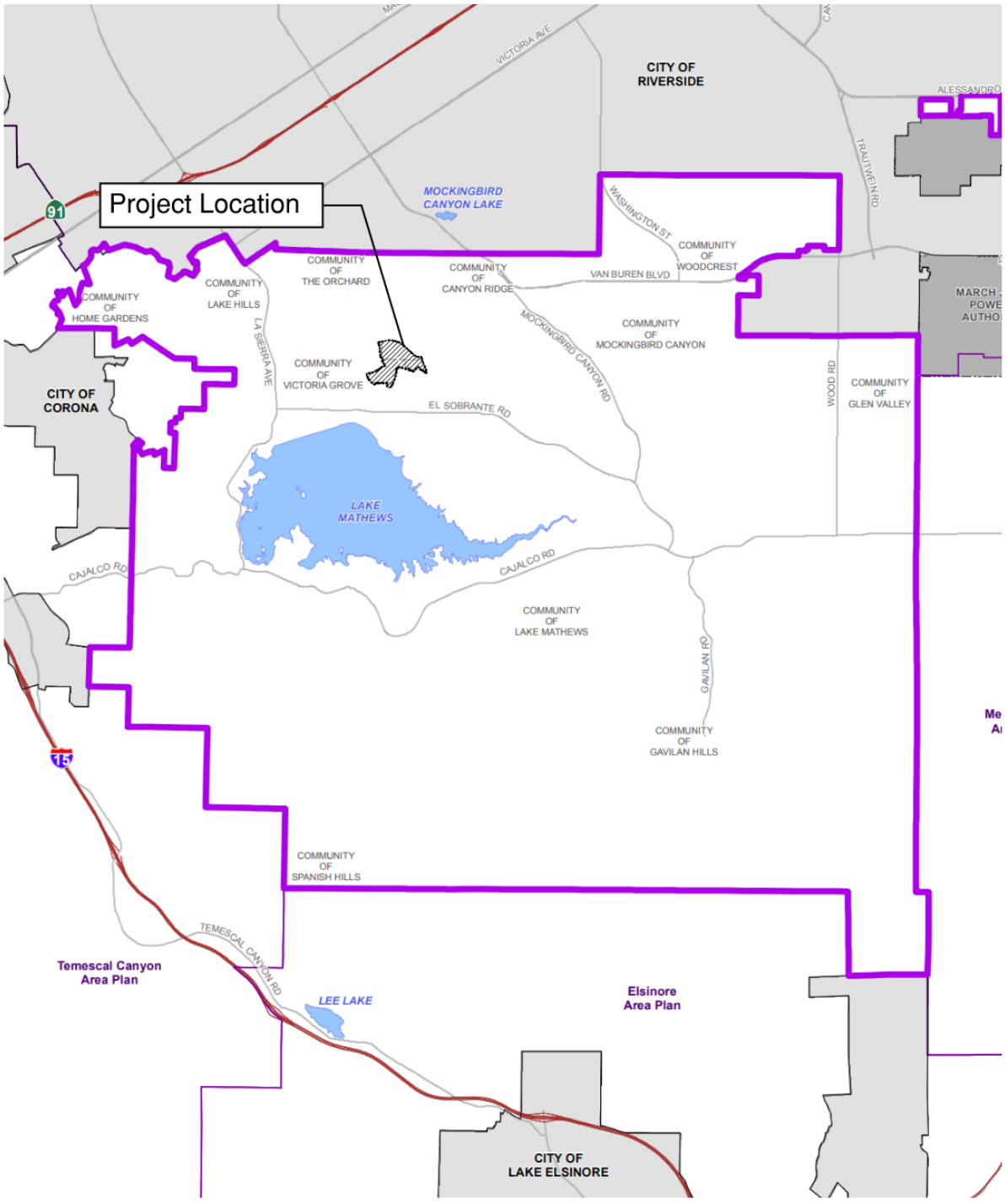
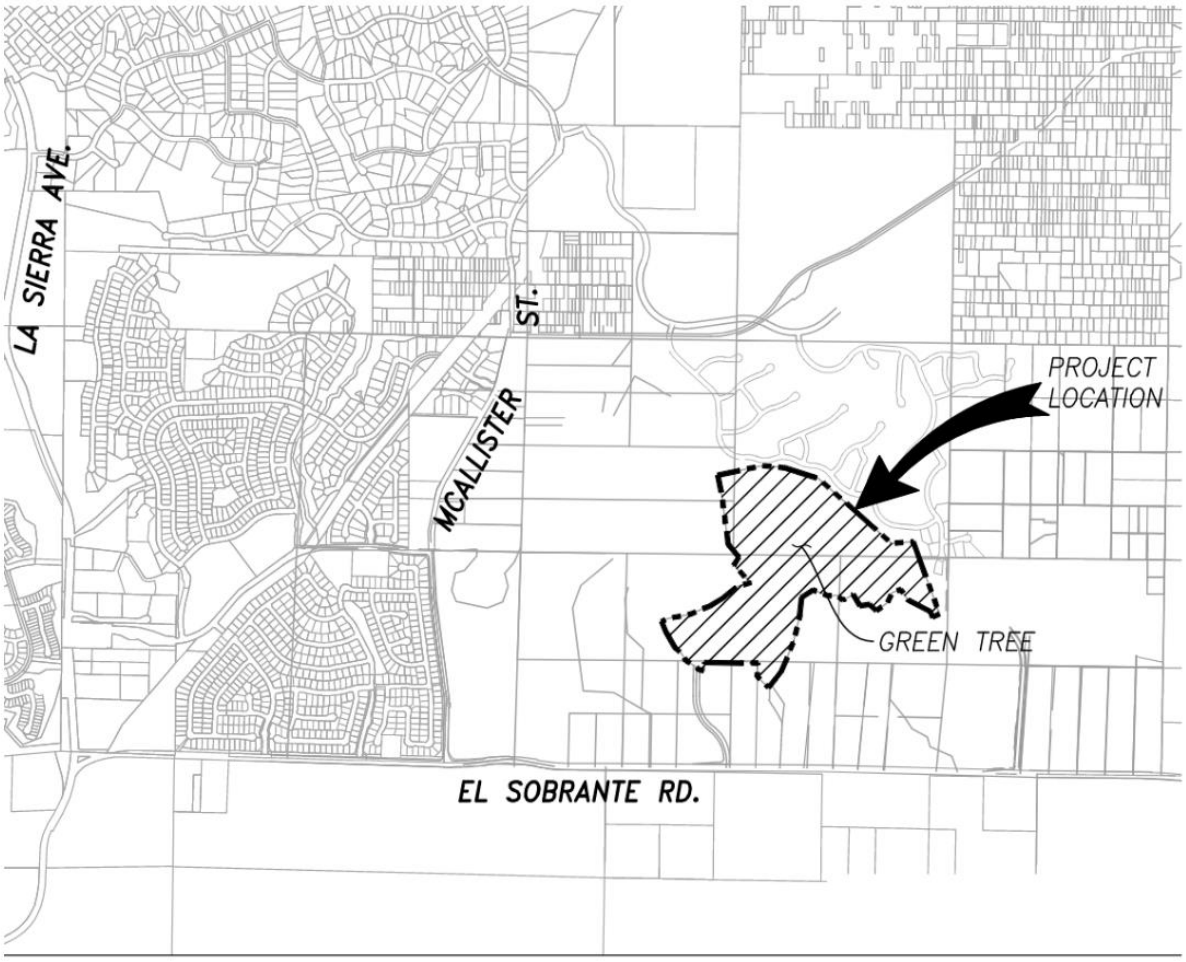
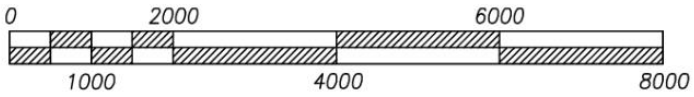


Figure 1.2 - Project Location (Lake Matthews Area Plan)



LAKE MATHEWS

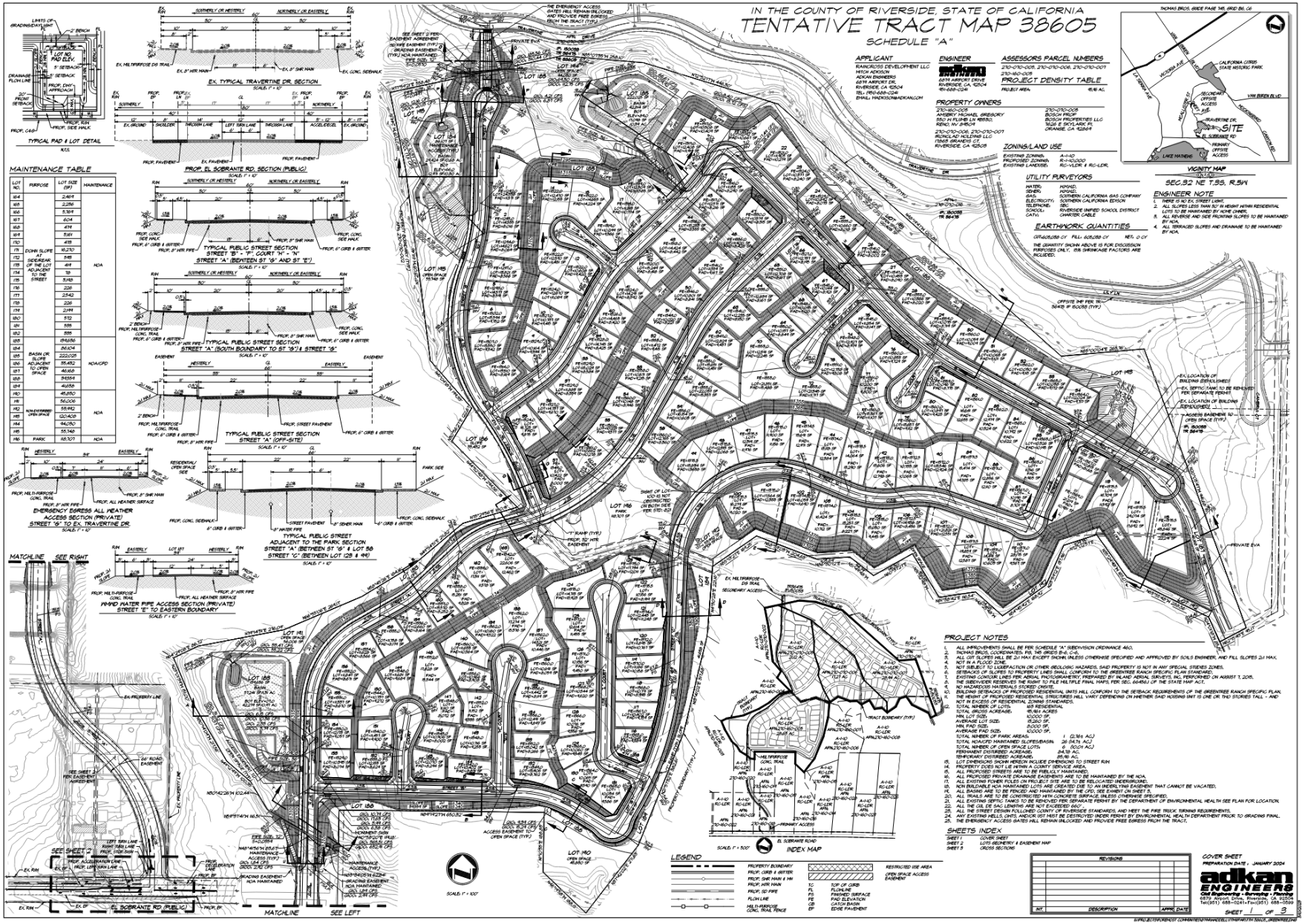


SCALE: 1" = 2000'

PREPARATION DATE: AUG 2023

Figure 1.3 - Project Specific Location

Figure 1.4 Tentative Tract Map No. 38605



B. Type of Project: Site Specific ☒; Countywide ☐; Community ☐; Policy ☐.

C. Total Project Area:

Residential Acres: 95.96	**Lots:** 163	**Units:** 163	**Projected No. of Residents:** 544
Commercial Acres: 0	**Lots:** 0	**Sq. Ft. of Bldg. Area:** 0	**Est. No. of Employees:** 0
Industrial Acres: 0	**Lots:** 0	**Sq. Ft. of Bldg. Area:** 0	**Est. No. of Employees:** 0
Other:			

D. Assessor's Parcel No(s): 270-070-005, 270-070-006, 270-070-007, 270-160-005

E. Street References: North of El Sobrante Road, south of Via Tuscany, east of McAllister Street, and west of Vista Del Lago Drive.

F. Section, Township & Range Description or reference/attach a Legal Description: Section 32 Township 3 South, Range 5 West.

G. Brief description of the existing environmental setting of the project site and its surroundings:
The Project site consists of vacant and undeveloped land that is routinely disturbed by weed abatement activities (i.e., discing). Unpaved and unplanned trails and roadways are located throughout the entire Project site. Along the southern and northern perimeters in the eastern portions of the Project site are existing natural drainage channels; these drainage channels converge near the northwestern Project boundary, with drainage courses traversing the western and north-central portions of the Project site. The Project site is characterized by gently sloping hills with areas containing more level ground. Project site elevations range from approximately 1,230 feet above mean sea level (AMSL) along the northern boundary in the western portion of the Project site (near the creek) to approximately 1,410 AMSL at the eastern boundary of the Project site (Google Earth, 2023).

The Project site is located in a portion of Riverside County that is transitioning from agricultural land uses to medium and low density suburban developments. Under existing conditions, the Project site is surrounded to the north, south, and east by a mixture of agricultural facilities, housing developments undergoing active construction, and undeveloped or underutilized parcels of land. The majority of the land surrounding of the Project site are designated by the Riverside County General Plan for "Rural," "Very Low Density," "Low Density," or "Medium Density" Residential development. Land uses surrounding the Project site include the following:

North: The Project site is bordered the development of 171 single-family homes as part of approved Tract Map No. 36475 (Tramonte). Further north is a residential development of 343 single-family homes as part of approved Tract Map No. 36390 (Citrus Heights).

South: The Project site's southern boundary is adjacent to agricultural fields and groves, undeveloped/vacant land (containing sparse amounts of natural vegetation due to on-going weed-abatement activities), and accessory structures and residences that support agricultural activity. Along a portion of the southern boundary and to the southwest are additional agricultural groves and vacant land. Further south of the Project site is El Sobrante Road beyond which is undeveloped land, agricultural uses, and Lake Matthews.

East: Immediately east of the project is vacant land containing the remnants of an existing orange grove, now mostly consisting of natural vegetation and on-going weed abatement activities. Further to the

east of the Project site is Vista Del Lago Drive, beyond which are a couple of agricultural groves, rural residential uses, and undeveloped land that has been subject to weed abatement.

West: The Project site's western boundary is adjacent to agricultural fields, groves, greenhouses, and accessory structures in support of agricultural activity. Several single-family detached residences also occur in association with these agricultural uses. Further southwest is an approved development under construction with up to 272 single-family homes as part of approved Tract Map No. 36730 (Highland Grove). Beyond is McAllister Street and a medium-density residential community with lot sizes as small as 7,200 s.f.

H. Other Public Agency Involvement and Required Permits:

The project will be reviewed for concurrence of the Determination of Biologically Equivalent or Superior Preservation Report (DBESP) by the following agencies:

- California Department of Fish and Wildlife (CDFW)
- Army Corps of Engineers (ACOE)
- State Water Quality Control Board (SWQCB)

The Project will be reviewed by Western Municipal Water District (WMWD) for feasibility of providing capacity for water and sewer facilities.

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

A. General Plan Elements/Policies:

1. **Land Use:** The Project site is located within the Lake Mathews/Woodcrest Area Plan (LMWAP). The Riverside County General Plan land use designations that currently apply to the Project site include "Rural Community – Low Density Residential (RC-LDR)" and "Rural Community – Very Low Density Residential (RC-VLDR)."

2. **Circulation:** The Riverside County Transportation Department will review the Project for conformance with County Ordinance No. 461 (Road Improvement Standards and Specifications). Adequate circulation facilities exist or are planned to serve the proposed development. The proposed Project adheres to all applicable circulation policies of the Riverside County General Plan. A Project-specific traffic study has been prepared that will identify any project specific improvements to confirm consistency with the General Plan Circulation Element.

3. **Multipurpose Open Space:** The Project site is not identified for conservation by the Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Although habitat conservation is not required on the Project site pursuant to the MSHCP, all projects must demonstrate compliance with applicable MSHCP requirements in accordance with the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protection of Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures." A discussion of the Project's consistency with these sections of the MSHCP is provided in the project specific biological and MHCP consistency analysis, along with an analysis of consistency with the General Plan goals and policies related to multipurpose open space.

4. **Safety:** The Project site primarily is located in a moderate fire risk zone, with the drainage that traverses the northwest portion of the Project site identified as being within a very high fire zone. The Project site is not identified as being located in an area that is susceptibility to liquefaction or

subsidence hazards. No faults or fault zones occur on-site. The future workers or residents at the Project site would not be subjected to any emergency response deficiencies due to Project design and the Project Applicant would be required to pay all applicable development impact fees that are used to fund emergency services, as required by the County.

5. **Noise:** Although the Project site is not located in area known to be subject to high levels of noise, an acoustical analysis was performed to confirm Project consistency the related General Plan goals and policies that address environmental noise.

6. **Housing:** The Riverside County General Plan Housing Element does not contain any policies applicable to the proposed Project, but rather identifies programs and actions to achieve the County's goals with respect to housing. The proposed Project does, however, relate to the County General Plan Housing Element through the Project's proposed land uses on the subject property. Specifically, the provision of up to 163 residential dwelling units on-site would accommodate a portion of the County's long-term housing demand and would expand the range of housing opportunities available in the Project area. The 163 proposed dwelling units are consistent with densities allowed for the site under existing General Plan land use designations. The land uses proposed by the Project on the site property would not adversely impact the implementation of the County General Plan Housing Element's goals or policies.

7. **Air Quality:** The proposed Project would be required to control fugitive dust emissions during grading and construction activities and to reduce air pollutant emissions to the greatest feasible extent in accordance with South Coast Air Quality Management District (SCAQMD) requirements. Long-term operation of the Project has the potential to violate SCAQMD thresholds of significance for daily air pollutant emissions. A Project-specific air quality impact analysis was prepared, the results show the projects consistency related to all applicable Riverside County General Plan Air Quality Element policies.

8. **Healthy Communities:** The proposed Project would be required to expand the current bike path and trail system. This would also include the development of a community park within walking distances of the homes within the community. The community park would be centrally located and connected to a proposed regional bike and trail system connecting to the existing community to the north and southerly to El Sobrante Road. The proposed project would align with implementation of the Riverside County General Plan Healthy Communities goals and policies

9. **Environmental Justice Summary:** This project is not located within an Environmental Justice Community

B. General Plan Area Plan(s): Lake Mathews/Woodcrest Area Plan

C. Foundation Component(s): Rural Community (RC)

D. Land Use Designation(s): The following provides a summary of the site's existing and proposed land use designations.

1. Existing: "Rural Community – Low Density Residential (RC-LDR)" and "Rural Community – Very Low Density Residential (RC-VLDR)."

2. Proposed: No changes to the existing land use are being proposed. The project would remain "Rural Community – Low Density Residential (RC-LDR)" and "Rural Community – Very Low Density Residential (RC-VLDR)."

E. Overlay(s), if any: None

F. Policy Area(s), if any: El Sobrante Policy Area

G. Adjacent and Surrounding:

1. **General Plan Area Plan(s):** Temescal Canyon Area Plan to the west, Mead Valley Area Plan to the east, and Elsinore Area Plan to the south

2. **Foundation Component(s):** "Rural" to the east and west; "Rural Community" to the north and south; "Open Space" to the north

3. **Land Use Designation(s):** North of the Project site is "Rural Community – Very Low Density Residential," "Rural Community – Estate Density Residential," "Rural Community – Low Density Residential," and "Open Space – Conservation"; south of the Project site is "Rural Community – Very Low Density Residential," and "Rural Community – Estate Density Residential," "Rural Community – Low Density Residential"; east of the Project site is "Rural Residential"; and west of the Project site is "Rural residential" and "Low Density Residential".

4. **Overlay(s), if any:** None

5. **Policy Area(s), if any:** El Sobrante Policy Area

H. Adopted Specific Plan Information

1. **Name and Number of Specific Plan, if any:** None

2. **Specific Plan Planning Area, and Policies, if any:** None

I. Existing Zoning: Light Agriculture-10 Acre Minimum (A-1-10)

J. Proposed Zoning, if any: One-Family Dwellings (R-1)

K. Adjacent and Surrounding Zoning: Residential Agricultural (R-A-1), Specific Plan (S-P), Single-Family Residential (R-1), and Light Agricultural-10 Acre Minimum (A-1-10) to the north; Light Agriculture (A-1-10) to the east; Light Agriculture (A-1-10) and Light Agriculture with Poultry (A-P) to the south; and Specific Plan (S-P), Light Agriculture- 5 Acre Minimum (A-1-5), Residential Agricultural-5 Acre Minimum (R-A-5), and Single Family Residential (R-1) to the west

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (x) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Agriculture & Forest Resources	☐ Hydrology / Water Quality	☒ Transportation
☐ Air Quality	☐ Land Use / Planning	☒ Tribal Cultural Resources
☒ Biological Resources	☐ Mineral Resources	☐ Utilities / Service Systems
☒ Cultural Resources	☐ Noise	☒ Wildfire
☐ Energy	☐ Paleontological Resources	☐ Mandatory Findings of Significance
☒ Geology / Soils	☐ Population / Housing	
☐ Greenhouse Gas Emissions	☐ Public Services	

IV. DETERMINATION

On the basis of this initial evaluation:

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED
☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project, described in this document, have been made or agreed to by the project proponent. **A MITIGATED NEGATIVE DECLARATION** will be prepared.
☐ I find that the proposed project MAY have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS PREPARED
☐ I find that although the proposed project could have a significant effect on the environment, **NO NEW ENVIRONMENTAL DOCUMENTATION IS REQUIRED** because (a) all potentially significant effects of the proposed project have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, (b) all potentially significant effects of the proposed project have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, (c) the proposed project will not result in any new significant environmental effects not identified in the earlier EIR or Negative Declaration, (d) the proposed project will not substantially increase the severity of the environmental effects identified in the earlier EIR or Negative Declaration, (e) no considerably different mitigation measures have been identified and (f) no mitigation measures found infeasible have become feasible.
☐ I find that although all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, some changes or additions are necessary but none of the conditions described in California Code of Regulations, Section 15162 exist. An **ADDENDUM** to a previously-certified EIR or Negative Declaration has been prepared and will be considered by the approving body or bodies.
☐ I find that at least one of the conditions described in California Code of Regulations, Section 15162 exist, but I further find that only minor additions or changes are necessary to make the previous EIR adequately apply to the project in the changed situation; therefore a **SUPPLEMENT TO THE ENVIRONMENTAL IMPACT REPORT** is required that need only contain the information necessary to make the previous EIR adequate for the project as revised.

☐ I find that at least one of the following conditions described in California Code of Regulations, Section 15162, exist and **a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT** is required: (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any the following:(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or,(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR or negative declaration would substantially reduce one or more significant effects of the project on the environment, but the project proponents decline to adopt the mitigation measures or alternatives.

Signature

9/11/24
Date

Russell Brady
Printed Name

For: John Hildebrand
Planning Director

V. ACRONYMS AND ABBREVIATIONS

Acronym	Definition
§	Section
>	greater than
≥	greater than or equal to
A-1	Light Agriculture
A-1-5	Light Agriculture for 5-acre minimum lot size
A-1-10	Light Agriculture for 10-acre minimum lot size
A-2	Heavy Agriculture
A-D	Agriculture-Dairy
A-P	Alquist-Priolo
A-P	Light Agriculture with Poultry
a.m.	Ante Meridiem (between the hours of midnight and noon)
AM	Ante Meridiem (between the hours of midnight and noon)
AB	Assembly Bill
ac	Acres
ACM	Alternative Calculation Method
ACOE	Army Corps of Engineers
A.D.	Anno Domini
ADT	Average Daily Traffic
afu	Undocumented Artificial Fill
AFY	Acre Feet per Year
AG	Agricultural Preserve Diminishment
AGN	Agricultural Preserve Notice of Nonrenewal
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
amsl	Above Mean Sea Level
APE	Area of Potential Effect
APN	Assessor Parcel Number
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
BAAQMD	Bay Area Air Quality Management District
B.C.	Before Christ
BFSA	Brian F. Smith and Associates (Project Technical Consultant)
BMPs	Best Management Practices
C&D	Construction & Demolition
C/V	Citrus/Vineyard
C2F6	Hexafluoroethane
C2H6	Ethane
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAGN	Coast California Gnatcatcher CalEEMod™ California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code

CA MUTCD	California Manual on Uniform Traffic Control Devices
Cal Pub Res.	California Public Resources Code
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPSSA	Criteria Area Plant Species Survey Area
CARB	California Air Resources Board
CASSA	Criteria Area Species Survey Area
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDC	California Department of Conservation
CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFCs	Chlorofluorocarbons
C2F6	Hexaflouroethane
CF4	Tetraflouromethane
CF3CH2F	HFC-134a
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
CGC	California Government Code
CGS	California Geologic Survey
C2H6	Ethane
CH4	Methane
CH3CHF2	HFC-152a
CHF3	HFC-23
CIPP	Cast-In-Place Pipe
CIWMB	California Integrated Waste Management Board
CIWMP	California Integrated Waste Management Plan
CLCA	California Land Conservation Act
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
COA	Condition of Approval
COG	Council of Governments
COHb	carboxyhemoglobin
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
COHb	carboxyhemoglobin

COP	Community Oriented Policing
COPPS	Community Oriented and Policing Problem Solving
CPUC	California Public Utilities Commission
CRDR	County Regulation and Design Requirement
CRMP	Cultural Resources Monitoring Program
CRRC	Cool Roof Rating Council
CSA	County Service Areas
CTC	California Transportation Commission
CTR	California Toxics Rule
Cu	Copper
CWA	Clean Water Act
CWC	California Water Code
c.y.	Cubic Yards
CZ	Change of Zone
dB	Decibel
dBA	A-weighted Decibels
dBA Leq	A-weighted Decibels equivalent sound level
DBESP	Determination of Biologically Equivalent or Superior Preservation
DEH	Department of Environmental Health
DEIR	Draft Environmental Impact Report
DIF	Development Impact Fee
DOSH	Division of Occupational Safety and Health
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
du	Dwelling Unit
du/ac	Dwelling units per acre
DWR	Department of Water Resources
E+P	Existing plus Project Conditions
E+P	Existing plus Project Conditions
EA	Existing plus Ambient
EAC	Existing plus Ambient plus Cumulative
EAP	Existing plus Ambient plus Project
EAPC	Existing plus Ambient plus Project plus Cumulative
EDR	Environmental Data Resources, Inc.
e.g.	exempli gratia, meaning “for example”
EIR	Environmental Impact Report
EIS	Eastern Information Center
EMFAC	Emission Factor Model
EO	Executive Order
EPA	Environmental Protection Agency
EPS	Emission Performance Standard
ESA	Endangered Species Act
et seq.	et sequentia, meaning "and the following”
F	Fahrenheit
FAA	Federal Aviation Administration
FBR	Fire Behavior Report
FEIR	Final Environmental Impact Report

FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Map
FHA	Federal Housing Administration
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GBN	Ground-Based Noise
GBV	Ground-Based Vibration
GCC	Global Climate Change
Gg	Gigagrams
GHG	Greenhouse Gas
GIS	Geographic Information System
GMZ	Groundwater Management Zone
Gov. Code	Government Code
GPA	General Plan Amendment
GPCD	Gallons per capita per day
gpd	Gallons per Day
GPLUA	No Project/General Plan Land Use Alternative
GSA	Groundwater Sustainability Agencies
GSPs	Groundwater Sustainability Plans
GWP	Global Warming Potential
H2O	Water Vapor
HA	Hydrologic Area
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HERS	Home Energy Rating System
HET	High-Efficiency Toilet
HI	Hazard Index
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act
HOA	Homeowners' Association
hp-hr-gal	Horsepower hours per gallon
HSA	Hydrologic Subarea
HSWA	Hazardous and Solid Waste Amendments
HUD	United States Department of Urban Development
HWCL	Hazardous Waste Control Law
I	Interstate
i.e.	that is
IA	Implementing Agreement
IBC	International Building Code
ICAO	International Civil Aviation Organization
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change

IS	Initial Study
ISEE	International Society of Explosives Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
IWMA	Integrated Waste Management Act
IWMP	Integrated Waste Management Plan
Kcgb	Granodiorite and Gabbro
kWh	kilowatt-hour
lbs	pounds
LBV	Least Bell's Vireo
LCA	Life-cycle analysis
LCFS	low carbon fuel standard
LDR	Low Density Residential
LDN	Day-Night Average Noise Level
LEA	Lead Enforcement Agency
Leq	equivalent continuous sound level
LMWAP	Lake Mathews/Woodcrest Area Plan
LOS	Level of Service
LRA	Local Responsibility Area
LSA	Lake and Streambed Alteration Agreement
LSTs	Localized Significance Thresholds
LULUCF	Land-Use Change and Forestry
M-R	Modulus of Rupture
MBTA	Migratory Bird Treaty Act
MDR	Medium Density Residential
Mgd	million gallons per day
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
MMTCO2e	million metric tons of carbon dioxide equivalent
Mph	Miles per hour
MPG	Miles per gallon
MPO	Metropolitan Planning Organization
MRZ-3	Mineral Resource Zone 3
MSHCP	Multiple Species Habitat Conservation Plan
MTCO2e	Metric Tons of Carbon Dioxide Equivalent
MVTS	Moreno Valley Transfer Station
MWD	Metropolitan Water District
N/A	Not Applicable
n.d.	no date
NAHB	National Association of Home Builders
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NDA	No Project/No Development Alternative
NEPSSA	Narrow Endemic Plant Species Survey Area

NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NLR	Noise Level Reduction
No.	Number
NO	Nitric Oxide
NO2	Nitrogen Dioxide
NOX	Nitrogen Oxides
N2	Nitrogen
N2O	Nitrous Oxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NPS	Non-point source
NTR	National Toxics Rule
NVIA	Noise and Vibration Impact Assessment
O2	Oxygen
O3	Ozone
OPR	Office of Planning and Research
Ord.	Ordinance
OS-C	Open Space – Conservation
OSHA	Occupational Safety and Health Act
OSMRE	Office of Surface Mining Reclamation and Enforcement
Pb	Lead
PCBs	Polychlorinated biphenyls
PCC	Portland cement concrete
PEL	Permissible Exposure Limit
PeMS	Caltrans' Performance System Website
PFCs	Perfluorocarbons
PGAM	Peak Horizontal Ground Acceleration
PHF	peak hour factor
p.m.	Post Meridiem (between the hours of noon and midnight)
PM	Post Meridiem (between the hours of noon and midnight)
PM	Tentative Parcel Map
PM2.5	Fine Particulate Matter (2.5 microns or smaller)
PM10	Fine Particulate Matter (10 microns or smaller)
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRIMP	Paleontological Resource Impact Mitigation Program
PRPA	Paleontological Resources Preservation Act
PTS	Perris Transfer Station Pub. Res. Code Public Resources Code
Qal	Alluvium
Qcol	Colluvium
Qoa	Older Alluvium

Qvof	Very Old Alluvial Fan Deposits
R-A-1	Residential Agricultural with 1 acre minimum lot size
R-A-5	Residential Agricultural with 5 acre minimum lot size
R-1	One Family Dwellings
R-4	Planned Residential
RC-EDR	Rural Community – Estate Density Residential
RC-LDR	Rural Community – Low Density Residential
RC-VLDR	Rural Community – Very Low Density Residential
RCA	Regional Conservation Authority
RCDWR	Riverside County Department of Waste Resources
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCFD	Riverside County Fire Department
RCHCA	Riverside County Habitat Conservation Agency
RCPLS	Riverside County Public Library System
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RCTC	Riverside County Transportation Commission
REC	Recognized Environmental Concerns
RECLAIM	Regional Clean Air Incentives Market
REMEL	Reference Energy Mean Emission Level
RivTAM	Riverside County Transportation Analysis Model
RMS	Root Mean Square
ROGs	Reactive Organic Gasses
ROW	Right of Way
RR	Rural Residential
RPS	Renewable Portfolio Standards
RPU	Riverside Public Utilities Department
RPW	Relative Permanent Water
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUSD	Riverside Unified School District
RUSFP	Riverside Unit Strategic Fire Plan
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
S-P	Specific Plan Zone
s.f.	square foot or square feet
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCH	California State Clearinghouse (Office of Planning and Research)
SCS	Sustainable Communities Strategy
SEMS	Standardized Emergency Management System
SF6	Sulfur Hexafluoride

SFL	Sacred Lands File
SFP	School Facilities Program
SGMA	Sustainable Groundwater Management Act
SHS	State Highway Facilities
SIP	State Implementation Plan
SKR	Stephens' Kangaroo Rat
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
SLF	Sacred Lands Files
SO2	Sulfur Dioxide
SO4	Sulfates
SOX	Sulfur Oxides
SOC	Statement of Overriding Considerations
SoCAB	South Coast Air Basin
SOI	Sphere of Influence
SP	Specific Plan
SR-91	State Route 91
SRA	State Responsibility Area
SRA	Source Receptor Area
SRRE	Source Reduction and Recycling Element
STC	Sound Transmission Class
SWFF	Southwestern willow flycatcher
SWFP	Solid Waste Facility Permit
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Regional Control Board
TAC	Toxic Air Contaminants
TCL	Traditional Cultural Landscape
TCR	Tribal Cultural Resources
TIA	Traffic Impact Analysis
TLMA	Riverside County Transportation and Land Management Agency
tpd	Tons per day
tpw	Tons per week
TR	Tentative Tract Map
TSS	Total Suspended Solids
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code
U.S.	United States
USC	United States Code
USEPA	United States Environmental Protection Agency
USDA	U.S. Department of Agriculture
USFWS	United States Fish and Wildlife Service
USHMA	Urban Seismic Hazards Mapping Act
UWMP	Urban Water Management Plan
Vdb	Vibration Decibel
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds

WDR	Waste Discharge Requirements
WIFL	Willow Flycatcher
WMI	Watershed Management Initiative
WMWD	Western Municipal Water District
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Association of Governments
WRCRWA	Western Riverside County Regional Wastewater Authority
WRCRWTP	Western Riverside County Regional Wastewater Treatment Plan
WRP	Water Reclamation Plant
WRRA	Waste Reuse and Recycling Act
WSA	Water Supply Assessment
WWRF	Western Water Recycling Facility
YBP	Years before Present

VI. ENVIRONMENTAL ISSUES ASSESSMENT

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed project to determine any potential significant impacts upon the environment that would result from construction and implementation of the project. In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the County of Riverside, in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the proposed project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed project.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS Would the project:				
1. Scenic Resources a) Have a substantial effect upon a scenic highway corridor within which it is located?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐

Source(s): Caltrans Scenic Highways Map – Riverside County (Caltrans, 2019); Lake Mathews – Woodcrest Area Plan Figure 9 "Scenic Highways" (Riverside County, 2020c); Aesthetics section of the Riverside County General Plan EIR (Riverside County, 2020b); Countywide Design Standards and Guidelines (Riverside County, 2014); Google Earth Pro, 2023 (Google Earth, 2023); Project Application Materials.

Findings of Fact:

a) According to information from the California Department of Transportation (Caltrans, 2019), there are no State-designated Scenic Highways within the Project site's vicinity. The nearest State-designated Scenic Highway to the Project site is a segment of SR-74 located at the western boundary of the San Bernardino National Forest that provides ingress/egress to the San Bernardino National Forest, located approximately 30 miles east of the Project site (Caltrans, 2019; Google Earth, 2023). Due to distance, intervening development, and topography, the Project site is not visible from this segment of SR-74, and thus would have no effect on views available from this State-designated segment of SR-74.

The eligible State Scenic Highways in the Project vicinity are Interstate 15, located approximately 5.6 miles southwest of the Project site, and State Route 74 (SR-74), located approximately 11.3 miles southeast of the Project site; however, these highways are not officially designated as State Scenic Highways (Caltrans, 2019). In addition, due to distance, intervening development, and topography between the Project site and these state- eligible highways, the Project would not be visible from these highways, as confirmed by a viewshed analysis conducted using Google Earth (Google Earth, 2023). Therefore, Project implementation would have no effect on views available from Interstate 15 or State Route 74. Accordingly, the Project would have no impact on State-designated Scenic Highways.

The LMWAP indicates that the Project site is located in the vicinity of three County "Eligible" scenic highways. The Project site is located approximately 900 feet north of El Sobrante Road, approximately 1.2-mile east of the nearest County "Eligible" segment of La Sierra Avenue, and 2.4 miles north of the nearest County "Eligible" segment Cajalco Road, all of which are designated as County "Eligible" scenic highways (Riverside County, 2020c, Figure 9). Due to the 2.4-mile distance and intervening topography, and based on a viewshed analysis conducted in Google Earth, the Project would not be prominently visible from Cajalco Road; thus, the Project would result in no impacts to views from this County- Eligible Scenic Highway (Google Earth, 2023).

Although the Project site is proximal to El Sobrante Road and La Sierra Avenue, due to the rolling terrain of the surrounding area and existing intervening development and landscaping/vegetation, the Project site is not prominently visible from either of these County Eligible Scenic Highways. Based on a viewshed analysis conducted in Google Earth, the Project site would be only intermittently visible along the segment of El Sobrante Road between McAllister Street and Vista Del Lago Drive, and would be visible at a distance from a short segment of La Sierra Avenue located south of El Sobrante Road; the Project site would not be visible along remaining segments of El Sobrante Road and La Sierra Avenue (Google Earth, 2023). The Project's access roadway connection to El Sobrante Road represents the primary impact to views along El Sobrante Road, but this access road would not substantially affect the scenic integrity of views along El Sobrante Road as the majority of scenic views in this area are oriented towards Lake Mathews and away from the Project site. Given that the Project vicinity already is characterized by improved roadways, construction of the proposed access point along El Sobrante Road would not result in a substantial, adverse effect to these County-Eligible Scenic Highways. The existing improved roadways in the vicinity of the Project do not impact trees, rock outcroppings, or any other scenic resources. Additionally, viewshed analyses conducted in Google Earth show that the majority of views available from the above-described segments of El Sobrante Road and McCallister Street are of the eastern portions of the Project site, which are proposed for limited development with trails, recreational uses, community gardens, community orchards, grazing areas, trails, and rehabilitated vegetation, none of which would adversely affect the viewshed (Google Earth, 2023). Furthermore, it should be noted that both El Sobrante Road and McAllister Street are only "County-Eligible Scenic Highways," and are not officially designated as County Scenic Highways by the County's General Plan. There are no components of the proposed Project that would substantially or adversely affect views available along nearby County Eligible Scenic Highways. Accordingly, implementation of the proposed Project would result in less-than-significant impacts to County-designated scenic highways.

b) The Multipurpose Open Space Element of the Riverside County General Plan defines scenic vistas as "…points, accessible to the general public, that provide a view of the countryside" (Riverside County, 2020a, p. OS-52). The Project site does not afford any prominent scenic vistas or views open to the public. The only visually prominent resources within the Project Site's viewshed are distant views of surrounding hills and mountains, including the Lake Matthews Estelle Mountains Reserve approximately 5.7 miles to the south, Santa Ana Mountains approximately 11 miles to the south, and the San Gabriel Mountains

approximately 24 miles to the north that are highly common within the Project vicinity, and are not unique to the Project site. Additionally, although Lake Mathews represents a scenic resource within the Project's vicinity, direct views of Lake Mathews generally only are available south of El Sobrante Road, and development of the Project site as proposed would not obstruct any scenic views of Lake Mathews.

The Project site is currently undeveloped with remnants of a cleared citrus groves and earthen irrigation furrows in the northwestern portion of the property, a water tank storage shed on the eastern boundary of the site, and an existing water pumping station (operated by the Western Municipal Water District and Not a Part of the Project site) is located directly east of the Project site. Under existing conditions, the majority of the site has been disturbed by weed abatement activities (i.e., discing) conducted for fire abatement purposes, and unpaved and unplanned trails and roadways are located throughout the entire Project site. Several rock outcroppings occur throughout the site and are primarily located within the central portions of the Project site. These rock outcroppings do not form a prominent component of the surrounding viewshed because they are scarcely visible from off-site locations. The Project proposes to preserve several rock outcroppings in the park site and open space conservation areas on-site. Nevertheless, implementation of the proposed Projects would result in the permanent removal of rock outcroppings from the portions of the site proposed for development during grading activities. These rock outcroppings are not prominently visible from off-site locations, and the outcroppings themselves are not a prominent scenic resource within the Project's viewshed. Thus, the removal of these rock outcroppings from the Project site would not result in substantial damage to the surrounding viewshed and impacts due to their removal would be less than significant.

Development of the Project site would not substantially obstruct any prominent scenic vistas or scenic resources. Given the height of the proposed structures (i.e., maximum of 35 feet per the County Wide Standards), development on-site would not obstruct views of scenic resources in the region, particularly because the Project site only affords very distant views of major topographic elements within the surrounding viewshed and because views of Lake Mathews are generally not available north of El Sobrante Road (Google Earth, 2023).

Newly developed communities known as Citrus Heights and Tramonte border the project site to the north and are visible from the public by motorist and multipurpose trail users along Travertine Drive. Development as proposed by the Project would be required to comply with the County Wide Design Guidelines for the proposed Project, which contain standards related to architecture, landscaping, walls/fences, and other elements of the physical environment, and provide specific guidance for future implementing developments. Mandatory compliance with the Design Guidelines and development standards of the proposed zone would ensure that the Project is developed in such a fashion so as not to create an aesthetically offensive site open to public view.

Thus, because the proposed Project would not be visible from any designated scenic corridors, would not obstruct publicly-available views of major visual elements (e.g., mountains, Lake Mathews, etc.) within the viewshed, and would not result in an aesthetically offensive site open to public view, impacts to scenic vistas and resources would be less than significant.

c) The project site is located within a non-urbanized area of the County designated with the Rural Community foundation component of the County General Plan land use designation. The area surrounding the Project site is transitioning from agricultural land uses to medium and low-density suburban developments and is characterized as a rural and suburban area. The Project site is surrounded by a mixture of rural agricultural uses, housing tracts under construction, and undeveloped or underutilized parcels of land. All development on the Project site would be required to comply with the Countywide Design Standards and Guidelines (Riverside County, 2014), which have been crafted to ensure

that future development on-site is aesthetically pleasing and not visually offensive. Compliance with the Design Standards and Guidelines would ensure that the Project is developed in such a fashion so as not to degrade the visual character or quality of the Project site or its surroundings. The Project would be developed in a manner that is consistent with the transitioning suburban character of the surrounding area, including existing residential developments to the west, residential development under construction to the north, and planned residential uses to the north and southwest of the Project site. The project is consistent with the Design Guidelines set forth within the El Sobrante Policy as defined with the LMWAP which encourages the clustering of developable lots to reduce the projects ground disturbance, consistent with the projects proposed and applicable zoning standards. In addition, the Project would be developed in a manner that is not visually offensive either on-site or within the context of surrounding uses and planned development. There are no components of the Project that would result in the substantial degradation of the visual character or quality of the Project site and surrounding areas. Accordingly, impacts due to the degradation of the existing visual character or quality of the Project site and its surroundings would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

2. Mt. Palomar Observatory a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?	☐	☐	☐	☒

Source(s): Riverside County Ord. No. 655 (Regulating Light Pollution) (Riverside County, 2023); Riverside County General Plan EIR Figure "Mt. Palomar Night Time Lighting Policy Area" (Riverside County, 2020b); Project Application Materials

Findings of Fact:

a) According to the Riverside County General Plan EIR, the Project site is not located within the Mt. Palomar Nighttime Lighting Policy Area as defined by Ordinance No. 655 (Riverside County, 2023, Ord. No. 655). The Project site is located approximately 47 miles northwest of the Mt. Palomar Observatory and falls outside of the Policy Area's 45-mile radius from the Observatory (45 miles represents the maximum distance in which lighting could adversely affect nighttime observations at the Mt. Palomar Observatory). Therefore, the proposed Project has no potential to create substantial lighting levels that could adversely affect the operation of this facility. Accordingly, the proposed Project has no potential to interfere with the nighttime use of the Mt. Palomar Observatory. No impact would occur as a result of implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Other Lighting Issues a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
b) Expose residential property to unacceptable light levels?	☐	☐	☒	☐

Source(s): Site reconnaissance and photography (Adkan, 2023); Riverside County Ord. No. 915 (Regulating Outdoor Lighting) (Riverside County, 2023); Project Application Materials

Findings of Fact:

a) The Project site does not contain any artificial light sources or sources of glare under existing conditions (Adkan 2023). Implementation of the proposed Project would include exterior lighting elements. The Project is a proposed residential community, and all lighting elements that would be installed would be of low intensity and residential in character, primarily consisting of lights installed on residential lots, lights installed in on-site parks, and street lights, and would not create a new source of substantial light or glare that could adversely affect day or nighttime views in the area. Additionally, all lighting elements on-site would be required to comply with Riverside County Outdoor Lighting Standards (Ordinance No. 915). Ordinance No. 915 specifies the requirements of outdoor luminaries, including location, shielding, and direction such that outdoor lighting impacts would be less-than-significant (Riverside County, 2023, Ord. No. 915). Mandatory compliance with the County's ordinance would ensure that the proposed Project does not produce a new source of substantial light or glare from artificial lighting sources that would adversely affect day or nighttime views in the area. Additionally, there are no components of the proposed Project that would involve building materials that could create substantially amounts of glare. Therefore, impacts would be less than significant.

b) The Project would be required to comply with Riverside County Ordinance No. 915, which generally would preclude significant lighting impacts to surrounding properties. Ordinance No. 915 specifies the requirements of outdoor luminaries, including location, shielding, and direction such that outdoor lighting impacts are less-than-significant (Riverside County, 2023 Ord. No. 915). As a proposed residential community, lighting elements that would be installed would be of low intensity and residential in character and would primarily consist of lights installed on individual residential lots, lights installed in on-site parks, and street lights. The proposed lighting elements would be similar to surrounding existing residential developments located approximately 0.5-mile west, and 0.5-mile northwest of the Project site, and proposed residential developments located immediately adjacent to the Project's northern and southwestern boundaries. Project-related lighting would not result in the exposure of on- or off-site residential properties to unacceptable light levels. Thus, a less-than-significant impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE & FOREST RESOURCES Would the project:				
4. Agriculture a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	☐	☐	☒	☐
c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?	☐	☐	☒	☐
d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐

Source(s): California Department of Conservation (CDC) – CA Important Farmland Series Maps (CDC, 2020); Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County Williamson Act Map (CDC, 2023); Riverside County Ord. No. 625 (Right-To-Farm) (Riverside County, 2023); Project Application Materials.

Findings of Fact:

a) According to the Farmland Mapping and Monitoring Program (FMMP), the Project contains 95.96 acres of "Farmland of Local Importance." Of the farmland types identified within the FMMP, only "Prime Farmland" and "Unique Farmland" are considered to comprise "Important Farmland." (CDC, 2020) With implementation of the Project, it can be assumed that active agricultural uses within the portion of the site designated as "Farmland of Local Importance" would be eliminated, however project impacts due to the elimination of the active agricultural uses would not impact current active agricultural uses within any areas of the FMMP identified as "Prime Farmland" and "Unique Farmland." Thus, a less-than-significant impact would occur.

b) The Project site is currently zoned for agricultural land uses (Light Agriculture, A-1-10). The Project would result in a change to the zoning designation of the Project site from A-1-10 to One-family Dwellings (R-1) in order to accommodate the proposed land uses. Although the Project would eliminate agricultural uses, upon implementation of the Project and approval of the Project's Change of Zone, any potential inconsistency with agricultural zoning on-site would be eliminated. Therefore, impacts related to a conflict with agricultural zoning on-site would be less than significant.

Properties abutting the Project site to the east, north, west, and south of the Project site are zoned "Light Agriculture (A-1-10)" and "Light Agriculture with Poultry (A-P)," which are agricultural zoning designations Accordingly, the Project would be subject to Riverside County Ordinance No. 625, the "Riverside County Right-to-Farm Ordinance," which protects agricultural operations from nuisance complaints and encourages the development, improvement, and long-term viability of agricultural land where the landowner desires to continue agricultural operations in spite of urbanization that may occur in the

surrounding areas. Mandatory compliance with Ordinance No. 625 would ensure that Project-related construction and operational activities would not result in a conflict with existing agricultural operations on lands zoned for agricultural use in the surrounding area.

According to CDC, two properties located within the Project site (45.9 acres) are identified by the CDC as "Williamson Act - Prime Agricultural Land." The Project site is subject to two Williamson Act contracts, with one contract encumbering 28.63 acres of the Project site, and the second contract encumbering 17.27 acres of another portion of the Project site (45.9 acres of the Project site combined). The Project proposes two Notices of Nonrenewal (AGN 00175 and AGN 00176) to initiate the cancellation procedure for the site's two contracts. Pursuant to the provisions of the Williamson Act, the contract termination process would begin on the next anniversary date following the filing of the Notice of Nonrenewal, and the contract would be phased out over a term of nine (9) years. However, the project has initiated a petition to cancel the current Williamson Act contracts prior to the phase out of the nine (9) term and will be required to provide a 12.5% penalty on the property evaluation prior to certification of this Environmental Assessment by the Riverside County Board of Supervisors. Because the proposed Project would comply with the provisions of the Williamson Act contracts and Williamson Act contract termination and/or cancellation requirements, the Project would not conflict with the terms of the Williamson Act contracts and impacts would be less than significant.

Additionally, the project site is located within an Agricultural Preserve (El Sobrante No. 1). The agricultural preserve precludes use of the Project site for any use other than agriculture uses. The Project proposes an Agricultural Preserve Diminishment to remove the Project site from the El Sobrante No. 1 Agricultural Preserve area (APD240004). Approval of APD240004 by the Riverside County Board of Supervisors would eliminate any potential inconsistency that may result from future development of the subject property with residential land uses. Accordingly, impacts due to a conflict with the site's designation within the El Sobrante No. 1 Agricultural Preserve would be less than significant.

c) The Project is located within 300 feet of agriculturally-zoned properties. Properties to the east, west, and south of the Project site are zoned "Light Agriculture (A-1-10)" and "Light Agriculture with Poultry (A-P)." Accordingly, the Project would be subject to Riverside County Ordinance No. 625, the "Right-to-Farm" Ordinance, which protects agricultural operations from nuisance complaints and encourages the development, improvement, and long-term viability of agricultural land where the landowner desires to continue agricultural operations in spite of urbanization that may occur in the surrounding areas. Mandatory compliance with Ordinance No. 625 would ensure that Project-related construction and operational activities would not indirectly cause or contribute to the conversion of off-site farmland to non-agricultural use. Furthermore, although located within 300 feet of agriculturally zoned properties, agricultural uses have not occurred within or surrounding the project site for the last approximately 15 years (Google Earth, 2023). Impacts would be less than significant.

d) "Farmland" is defined in Section II (a) of Appendix G of the State CEQA Guidelines to mean Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As described under (a), above, the Project site contains 95.96 acres of "Farmland of Local Importance", which would effectively be converted to permanent non-agricultural use. However, assuming mandatory compliance with County Ordinance No. 625, as discussed above, there are no changes in the existing environmental components of the Project that would result in the conversion of other off-site Farmland to non-agricultural uses. Additionally, all other properties to the east, west, and south of the Project site remain within the El

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Sobrante No. 1 Agricultural Preserve and maintaining the right to operate and conduct agricultural uses through the Williamson Act land conservation contracts. Accordingly, impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

5. Forest	☐	☐	☐	☒
a) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g))?				
b) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?	☐	☐	☐	☒

Source(s): Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County General Plan Figure OS-4a (Riverside County, 2020a); Project Application Materials.

Findings of Fact:

a) The Project site is not zoned as forest land. There are no lands within the Project site's vicinity that are zoned for forest land, timberland, or Timberland Production (RCIT, 2023). As such, there is no potential for the Project to conflict with or cause the rezoning of such lands. Therefore, no impacts would occur.

b) There is no forest land on the Project site or surrounding area (Riverside County, 2020a, Figure OS-4a). There would be no potential for the proposed Project to cause the loss of forest land or the conversion of forest land to non-forest use. Therefore, no impacts would occur.

c) Due to the absence of forest lands on the Project site and in its vicinity, there is no potential for the proposed Project to cause changes in the existing environment which, due to their location or nature, could result in the conversion of forest land to non-forest use. Therefore, no impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY Would the project:				
6. Air Quality Impacts a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Source(s): Source: SCAQMD 2022 Air Quality Management Plan (SCAQMD, 2022); California Air Resources Board Area Designation Maps (CARB, 2022); Google Earth Pro (Google Earth, 2023); Riverside County Information Technology – Map My County (RCIT, 2023); SCAQMD Rule 402 (SCAQMD, 1976); Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis (Vista Environmental, 2023); Project Application Materials.

Findings of Fact:

a) The Project site is located within the SoCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, state and federal air quality standards are exceeded in most parts of the SoCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2022 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) and updated emission inventory methodologies for various source categories. The Project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below. Criteria for determining consistency with the 2022 AQMP are defined in Chapter 12, Section 12.2, and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993). These indicators are discussed below. (Vista Environmental, 2023, pp. 18-19)

AQMP Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Based on the air quality modeling analysis, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance or local thresholds of significance. The ongoing operation of the proposed project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur and no mitigation would be required. (Vista Environmental, 2023, p.55)

AQMP Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the RTP/SCS (Connect SoCal) and FTIP (2019 FTIP). The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on SCAG and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this project, the County of Riverside's Lake Matthews/Woodcrest Area Plan Land Use Plan defines the assumptions that are represented in AQMP.

The majority of the project site is currently designated as Rural Community – Low Density Residential and there is a small area in the eastern portion of the project site that is designated as Rural Community – Very Low Density Residential in the Area Plan. The proposed project has been designed to meet the allowed number of residential units under the existing land use designations and would not require a General Plan Amendment. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

AQMP Consistency Conclusion

The project would not have the potential to result in or cause NAAQS or CAAQS violations. The Project's development intensity is consistent with the development intensities allowed by the County General Plan. Thus, the Project would not conflict with the 2022 AQMP, and a less-than-significant impact would occur. (Vista Environmental, 2023, p.55)

b) The SCAQMD has published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf). In this report the AQMD clearly states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report (EIR). The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility- wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. The following section calculates the potential air emissions associated with the construction and operations of the proposed project and compares the emissions to the SCAQMD standards.

Construction Emissions

The construction activities for the proposed project are anticipated to include site preparation and grading up to 85.34 acres of the 96.96-acre project site plus up to 2.8 acres of offsite area, building construction of 163 single-family homes and a Community Park, paving of the onsite roads and offsite access roads, sidewalks and hardscapes, and application of architectural coatings.

The CalEEMod model has been utilized to calculate the construction-related emissions from the proposed project. The daily construction-related criteria pollutant emissions from the proposed project by season and year of construction activities are shown below in the Table 6.1 below:

Table 6.1 - Construction-Related Criteria Pollutant Emissions

Season and Year of Construction	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Summer 2025[1]	4.78	83.7	120.5	0.86	18.4	4.80
Winter 2025	4.77	43.5	41.1	0.10	11.1	4.38
Summer 2026	1.33	10.6	17.4	0.03	1.30	0.58
Winter 2026	1.32	10.7	16.1	0.03	1.30	0.58
Summer 2027	1.28	10.1	17.0	0.03	1.26	0.54
Winter 2027	1.26	10.2	16.1	0.03	1.26	0.54
Summer 2028	43.1	17.2	29.4	0.04	1.84	0.84
Winter 2028	43.1	17.2	28.1	0.04	1.84	0.84
Maximum Daily Construction Emissions	**43.1**	**83.7**	**120.5**	**0.86**	**18.4**	**4.80**
SCQAMD Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
SCAQMD Local Thresholds[2]	**--**	**277**	**1,709**	**--**	**19**	**8**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Includes emissions from blasting. Based on 2,000 cubic yards of rock over a 10,000 square foot area.
[2]The nearest sensitive receptor is a ranch home located as near as 100 feet (30 meters) west of the proposed access road to El Sobrante Road. As such, the 25 meter and 50 meter thresholds were interpolated to find the 30 meter thresholds. Calculated from SCAQMD's Mass Rate Look-up Tables for five acres in Air Monitoring Area 23, Metropolitan Riverside County.
Source: CalEEMod Version 2022.1.

Table 6.1 shows that none of the analyzed criteria pollutants would exceed either the regional or local emissions thresholds during construction of the proposed project. Therefore, a less than significant regional or local air quality impact would occur from construction of the proposed project. (Vista Environmental, 2023, p.57)

Operational Emissions

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips, emissions from energy usage, onsite area source emissions created from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to regional air quality and local air quality impacts with the on-going operations of the proposed project.

Operations-Related Regional Criteria Pollutant Analysis

The operations-related regional criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model. The worst-case summer or winter VOC, NOx, CO, SO¬2, PM10, and PM2.5 daily emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table 6.2 below:

Table 6.2 - Operational-Regional Criteria Pollutant Emissions

	Pollutant Emissions (pounds/day)					
Activity	**VOC**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Mobile Sources	5.86	6.02	54.5	0.15	13.4	3.47
Area Sources	19.9	0.09	9.26	<0.01	<0.01	<0.01
Energy Usage	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions	**25.8**	**6.11**	**63.8**	**0.15**	**13.4**	**3.47**
SCQAMD Regional Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
1 Mobile sources consist of emissions from vehicles and road dust.
2 Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
3 Energy usage consists of emissions from natural gas usage. PDF-1 requires the project to be all-electric, as such no energy usage emissions would be created from the proposed project.
Source: Calculated from CalEEMod Version 2022.1.

The data provided in Table 6.2 shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the proposed project. (Vista Environmental, 2023, p.58)

In Sierra Club v. County of Fresno (2018) 6 Cal.5th 502 (also referred to as "Friant Ranch"), the California Supreme Court held that when an EIR concluded that when a project would have significant impacts to air quality impacts, an EIR should "make a reasonable effort to substantively connect a project's air quality impacts to likely health consequences." In order to determine compliance with this Case, the Court developed a multi-part test that includes the following:

1) The air quality discussion shall describe the specific health risks created from each criteria pollutant, including diesel particulate matter.

This Analysis details the specific health risks created from each criterion. In addition, the specific health risks created from diesel particulate matter is included as part of this analysis. As such, this analysis meets the part 1 requirements of the Friant Ranch Case.

2) The analysis shall identify the magnitude of the health risks created from the Project. The Ruling details how to identify the magnitude of the health risks. Specifically, on page 24 of the ruling it states "The Court of Appeal identified several ways in which the EIR could have framed the analysis so as to adequately inform the public and decision makers of possible adverse health effects. The County could have, for example, identified the Project's impact on the days of nonattainment per year."

The Friant Ranch Case found that an EIR's air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided. As noted in the Brief of Amicus Curiae by the SCAQMD in the Friant Ranch case (https://www.courts.ca.gov/documents/9-s219783-ac-south-coast-air-quality-mgt-dist-041315.pdf) (Brief), SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on

how lead agencies should correlate air quality impacts with specific health outcomes. The SCAQMD discusses that it may be infeasible to quantify health risks caused by projects similar to the proposed Project, due to many factors. It is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). The Brief states that it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk, it does not necessarily mean anyone will contract cancer as a result of the Project. The Brief also cites the author of the CARB methodology, which reported that a PM2.5 methodology is not suited for small projects and may yield unreliable results. Similarly, SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NOX or VOC emissions from relatively small projects, due to photochemistry and regional model limitations. The Brief concludes, with respect to the Friant Ranch EIR, that although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.

On the other hand, for extremely large regional projects (unlike the proposed project), the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 pounds per day of NOx and 89,180 pounds per day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to ozone. As shown above in Table 6.1, project-related construction activities would generate a maximum of 43.1 pounds per day of VOC and 43.5 pounds per day of NOx and as shown above in Table 6.2, operation of the proposed project would generate 26.01 pounds per day of VOC and 10.34 pounds per day NOx. The proposed project would not generate anywhere near these levels of 6,620 pounds per day of NOx or 89,190 pounds per day of VOC emissions. Therefore, the proposed project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level.

Notwithstanding, this analysis does evaluate the proposed project's localized impact to air quality for emissions of CO, NOx, PM10, and PM2.5 by comparing the proposed project's onsite emissions to the SCAQMD's applicable LST thresholds. As evaluated in this analysis, the proposed project would not result in emissions that exceeded the SCAQMD's LSTs. Therefore, the proposed project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NOx, PM10, and PM2.5. (Vista Environmental, 2023, p.59)

Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. The proposed project has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analyzes the vehicular CO emissions and local impacts from on-site operations.

Local CO Hotspot Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality

impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards of 20 ppm over one hour or 9 ppm over eight hours.

At the time of the 1993 Handbook, the Air Basin was designated nonattainment under the CAAQS and NAAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Air Basin and in the state have steadily declined. In 2007, the Air Basin was designated in attainment for CO under both the CAAQS and NAAQS. SCAQMD conducted a CO hot spot analysis for attainment at the busiest intersections in Los Angeles during the peak morning and afternoon periods and did not predict a violation of CO standards . Since the nearby intersections to the proposed project are much smaller with less traffic than what was analyzed by the SCAQMD, no local CO Hotspot are anticipated to be created from the proposed project and no CO Hotspot modeling was performed. Therefore, a less than significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project. (Vista Environmental, 2023, p.60)

Local Criteria Pollutant Impacts from Onsite Operations

Project-related air emissions from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances may have the potential to create emissions areas that exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

The local air quality emissions from onsite operations were analyzed using the SCAQMD's Mass Rate LST Look-up Tables and the methodology described in LST Methodology. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. Table 6.3 shows the proposed project's operations-related local emissions from the CalEEMod model that includes area sources, energy usage, and vehicles operating in the immediate vicinity of the project site and the calculated emissions thresholds.

Table 6.3 - Operational-Related Criteria Pollutant Emissions

	Pollutant Emissions (pounds/day)			
Onsite Emission Source	**NOx**	**CO**	**PM10**	**PM2.5**
Mobile Sources[1]	0.75	6.81	1.68	0.43
Area Sources[2]	0.09	9.26	<0.01	<0.01
Energy Usage[3]	0.00	0.00	0.00	0.00
Total Emissions	**0.84**	**16.1**	**1.68**	**0.43**
SCAQMD Local Operational Thresholds[4]	**277**	**1,709**	**5**	**2**
Exceeds Threshold?	No	No	No	No

Notes:

[1] Mobile sources consist of emissions from vehicles and road dust and were calculated based on 1/8 of the mobile vehicular emissions, which is the estimated portion of vehicle emissions occurring within a quarter mile of the project site.

[2] Area sources consist of emissions from consumer products, architectural coatings and landscaping equipment.

[3] Energy usage consist of emissions from natural gas usage.

[4] The nearest sensitive receptor is a ranch home located as near as 100 feet (30 meters) west of the proposed access road to El Sobrante Road. As such, the 25 meter and 50 meter thresholds were interpolated to find the 30 meter thresholds. Calculated from SCAQMD's Mass Rate Look-up Tables for five acres in Air Monitoring Area 23, Metropolitan Riverside County.

The data provided in Table 6.3 shows that the on-going operations of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to onsite emissions and no mitigation would be required. (Vista Environmental, 2023, p.61)

Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant or represent a direct impact to any sensitive receptors in the area, thus would be a less than significant impact. (Vista Environmental, 2023, p.61)

c) The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the proposed project, which may expose sensitive receptors to substantial concentrations have been calculated above in Section 6(b) for both construction and operations, which are discussed separately below. The discussion below also includes an analysis of the potential impacts from toxic air contaminant emissions. The nearest sensitive receptors to the project site are the single-family homes located as near as 140 feet east of the project site. There is also a ranch home as near as 100 feet west of the proposed access road on the south side of the project site.

Construction-Related Sensitive Receptor Impacts

The construction activities for the proposed project are anticipated to include site preparation and grading up to 85.34 acres of the 96.96-acre project site plus up to 2.8 acres of offsite area, building construction of 163 single-family homes and a Community Park, paving of the onsite roads and offsite access roads, sidewalks and hardscapes, and application of architectural coatings. Construction activities may expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

Local Criteria Pollutant Impacts from Construction

The local air quality impacts from construction of the proposed project have been analyzed above in Section 6(b) and found that the construction of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance. Therefore, construction of the proposed project would create a less than significant construction-related impact to local air quality and no mitigation would be required. (Vista Environmental, 2023, p.61)

Toxic Air Contaminants Impacts from Construction

The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. It should be noted that the most current cancer risk assessment methodology recommends analyzing a 30-year exposure period for the nearby sensitive receptors.

Given the relatively limited number of heavy-duty construction equipment, the varying distances that construction equipment would operate to the nearby sensitive receptors, and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 or 70 years) substantial source of

toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet's usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0, Tier 1 or Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. Therefore, due to the limitations in off-road construction equipment DPM emissions from implementation of Section 2448, a less than significant short-term TAC impacts would occur during construction of the proposed project from DPM emissions.

As such, construction of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations. (Vista Environmental, 2023, p.62)

Operations-Related Sensitive Receptor Impacts

The on-going operations of the proposed project may expose sensitive receptors to substantial pollutant concentrations of local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from onsite operations. The following analyzes the vehicular CO emissions. Local criteria pollutant impacts from onsite operations, and toxic air contaminant impacts.

Local CO Hotspot Impacts from Project-Generated Vehicle Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors. The analysis provided above in Section 6(b) shows that no local CO Hotspots are anticipated to be created at any nearby intersections from the vehicle traffic generated by the proposed project. Therefore, operation of the proposed project would result in a less than significant exposure of offsite sensitive receptors to substantial pollutant concentrations. (Vista Environmental, 2023, p.62)

Local Criteria Pollutant Impacts from Onsite Operations

The local air quality impacts from the operation of the proposed project would occur from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances. The analysis provided above in Section 6(b) found that the operation of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required. (Vista Environmental, 2023, p.62)

Operations-Related Toxic Air Contaminant Impacts

Particulate matter (PM) from diesel exhaust is the predominant TAC in most areas and according to The California Almanac of Emissions and Air Quality 2013 Edition, prepared by CARB, about 80 percent of the outdoor TAC cancer risk is from diesel exhaust. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips that are anticipated to be generated by the on-going operation of the proposed single-family homes, a less than significant TAC impact would

be created from the on-going operations of the proposed project and no mitigation would be required. (Vista Environmental, 2023, p.63)

Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations and would be a less than significant impact.

d) Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints and solvents and from emissions from diesel equipment. Standard construction requirements that limit the time of day when construction may occur as well as SCAQMD Rule 1108 that limits VOC content in asphalt and Rule 1113 that limits the VOC content in paints and solvents would minimize odor impacts from construction. As such, the objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Through compliance with the applicable regulations that reduce odors and due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required. (Vista Environmental, 2023, p.63)

Operations-Related Odor Impacts

The proposed project would consist of the development of a single-family residential development. The proposed project would not contain any known sources of odors. Therefore, no significant impact related to odors would occur during the on-going operations of the proposed project. (Vista Environmental, 2023, p.63)

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Therefore, the proposed project would not result in other emissions, such as those leading to odors adversely affecting a substantial number of people and would be a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

BIOLOGICAL RESOURCES Would the project:				
7. Wildlife & Vegetation a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	☐	☒	☐	☐
b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?	☐	☒	☐	☐
c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	☐	☒	☐	☐
f) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Source(s): Riverside County Information Technology – Map My County (RCIT, 2023); Multiple Species Habitat Conservation Plan (MSHCP) Conservation Summary Report Generator (RCTLMA, 2023); Riverside County Transportation Land Management Western MSHCP (RCTLMA, 2004); Site reconnaissance and photography (Adkan, 2023); Riverside County Ordinance No. 559 (Regulating the Removal of Trees) (Riverside County, 2023); Riverside County Ordinance No. 897 (Regulating Noise) (Riverside County, 2023); Riverside County Ordinance No. 859 (Water Efficient Landscape) (Riverside County, 2023); Determination of Biologically Equivalent or

Superior preservation Report (GLA, 2024a); Biological Technical Report (GLA, 2024b); Jurisdictional Delineation (GLA, 2023c); Project Application Materials

Findings of Fact:

a) The Project site is located within the Lake Mathews/Woodcrest Area Plan of the Western Riverside County MSHCP but is not targeted for conservation under the MSHCP. The Western Riverside County MSHCP is a comprehensive habitat conservation/planning program for Western Riverside County that is intended to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats. (GLA, 2024b, p. 14). An analysis of the Project's consistency with the MSHCP is provided below.

MSHCP Consistency Analysis

An analysis of the proposed Project with respect to compliance with biological aspects of the Western Riverside County MSHCP was conducted and evaluates the proposed Project with respect to the Project's consistency with MSHCP Reserve assembly requirements, Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), Section 6.1.3 (Protection of Narrow Endemic Plant Species), Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface), and Section 6.3.2 (Additional Survey Needs and Procedures). (GLA, 2024b, p. 69)

Project Relationship to Reserve Assembly

The proposed Project is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process. The Project site is also not located within a MSHCP Criteria Area and will not be subject to Joint Project Review (JPR) by the RCA, there would be a less than significant impact. (GLA, 2024b, p. 69)

Project Compliance with MSHCP Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools)

Volume I, Section 6.1.2 of the MSHCP establishes procedures through which the protection of Riparian/Riverine Areas and Vernal Pools would occur within the Project Area. The purpose of the procedures is to ensure that the biological functions and values of these habitat areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained.

MSHCP Riparian/Riverine areas at the Project site total approximately 1.89 acres, of which 1.29 acres consist of MSHCP riparian and 0.61 acres of MSHCP riverinen. The site contains no MSHCP vernal pools.

MSHCP Riparian/Riverine at the Project site includes drainage courses and tributaries within the project site. These features convey ephemeral to relatively permanent flows with physical and biological stream flow indictors including changes in soil characteristics, break in bank slope, and incised channel banks with identifiable widths. These features support wetland/riparian habitat and/or have the potential to support aquatic resources.

All riparian vegetation communities occurring within the Project site were surveyed for least Bell's vireo, with 0.10 acre of Goodding's willow riparian woodland confirmed occupied by the species. One single male least Bell's vireo was detected during the focused surveys, no breeding behavior was observed.

Table 7.1 below summarizes MSHCP Riparian/Riverine areas at the Project site. (GLA, 2024b, p. 50-51)

Table 7.1 - Summary of MSHCP Riparian Riverine Area

Drainage Name	MSHCP Riverine (acres)	MSHCP Riparian (acres)	Total MSHCP Jurisdiction (acres)	Length (linear feet)
Drainage A	0.22	0.46	0.68	2,071
Tributary A-1	0.02	0.00	0.02	254
Tributary A-2	0.33	0.16	0.49	2,738
Drainage B	0.04	0.67	0.71	1,011
Total	**0.61**	**1.29**	**1.89**	**6,073**

The Project will impact Riparian/Riverine Areas subject to the policies in Volume I, Section 6.1.2 of the MSHCP that describes the process through which protection of riparian/riverine areas is implemented. The impacts to Riparian/Riverine as defined by the Riverside County MSHCP resources are coincident with impacts to the Riparian/Riverine identified to be under the jurisdiction of CDFW.

The Project will result in onsite and offsite impacts that includes both permanent and temporary impacts. Specifically, the Project will result in combined onsite and offsite permanent impacts to 0.65 acre of MSHCP riparian/riverine areas, of which 0.36 acre consists of riparian habitat. Temporary impacts including onsite and offsite and total 0.024 acre of which 0.02 acre is MSHCP riparian habitat. Impacts to MSHCP Riparian/Riverine would be considered significant and with the implementation of **Mitigation Measure BIO-1** through a combination of enhancement, rehabilitation, and establishment of riparian habitat would be reduced to less than significant. Impacts to MSHCP Riparian/Riverine areas are summarized in Table 7.2. (GLA, 2024b, p. 60-61)

Table 7.2 - Impacts to MSHCP Riparian/Riverine Areas

Drainage	Permanent Impacts		Temporary Impacts	
	Riparian	Riverine	Riparian	Riverine
Onsite A	0.03	0.001	0.001	0.00
Offsite A	0.08	0.00	0.005	0.00
Onsite B	0.10	0.00	0.003	0.00
Offsite B	0.10	0.00	0.01	0.00
Onsite A2	0.05	0.27	0.004	0.004
Total	**0.36**	**0.27**	**0.02**	**0.004**

Project Compliance with MSHCP Section 6.1.3 (Protection of Narrow Endemic Plant Species)

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Areas (NEPSSA), site-specific focused surveys for Narrow Endemic Plants Species will be required for all public and private projects where appropriate soils and habitat are present.

The Project site does not occur within a NEPSSA, nor does it support any other special-status plants based on site-specific surveys, there would be a less than significant impact. (GLA, 2024b, p. 69)

Project Compliance with MSHCP Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface)
The MSHCP Urban/Wildland Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. As the MSHCP Conservation Area is assembled, development is expected to occur adjacent to the Conservation Area. Future development in proximity to the MSHCP Conservation Area may result in edge effects with the potential to adversely affect biological resources within the Conservation Area.

While the Project is not located adjacent to an MSHCP Conservation Area, the measures will serve to address the potential for indirect effects to sensitive, avoided habitats adjacent to the proposed development; such as the Goodding's willow riparian woodland within the drainage courses. In addition to being a sensitive vegetation community (S3), 0.10 acre of Goodding'willow riparian woodland at the Project site supports the state and federally listed as endangered least Bell's vireo and has the potential to support other sensitive species such as the yellow warbler, pocketed free-tailed bat and western yellow bat. As a means to address the potential for indirect impacts to the sensitive vegetation community and sensitive species within avoided riparian areas, the Project will implement measures consistent with the MSHCP guidelines to address the following:

- Drainage;
- Lighting;
- Noise;
- Invasive species;
- Barriers;

Drainage
The Project incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the drainage courses is not altered in an adverse way when compared with existing conditions. In particular, measures to be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the drainage courses. Stormwater systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the drainage courses. This is accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

The Project's contractor will develop a Stormwater Pollution Prevention Plan (SWPPP) to runoff and water quality during construction. However, following the completion of activities, the Project area will not

result in increased runoff to the drainage courses, or affect the water quality. As such, no measures would be required post-construction.

The drainages in the Project site generally enter from the south/southeast and flow in a northerly or northwesterly/westerly direction before leaving the site and flowing onto the Citrus Heights Property (to the north). Flows leaving the Project ultimately discharge into the Santa Ana River (MSHCP Conserved Area). Although the Project would impact riparian/riverine areas, the majority of the natural drainage systems would remain intact such that the volume of flows leaving the Project would be similar to existing conditions. (GLA, 2024b, p. 63)

As such, drainage from the proposed Project would comply with applicable MSHCP requirements and impacts due to a conflict with the MSHCP would be less than significant.

Lighting

Night lighting shall be directed away from the drainage courses to protect species within the avoided riparian areas from direct night lighting. If night lighting is required during construction, shielding shall be incorporated to ensure ambient lighting in the riparian areas is not increased. (GLA, 2024b, p. 64)

Riverside County Ordinance 897, Regulating Noise, (Riverside County 2023, Ord. 897) limits construction activities to occur during daytime hours so as not to require lighting during construction, therefore the projects lighting impacts to riparian areas would be less than significant.

Under long-term conditions, the proposed Project would be required to ensure that all exterior lights are shielded where feasible and focused to minimize spill light into the night sky or adjacent properties. Through compliance with the outdoor lighting requirements of Riverside County Ordinance No. 655 and the outdoor lighting design guidelines of the proposed Greentree Ranch Specific Plan, the Project's lighting impacts to the adjacent MSHCP Conservation Area would be less than significant.

Noise

During the least Bell's vireo breeding season (March 15 through August 31) the Project shall implement the use of a noise attenuating wall along the Project boundary for construction and permanent operational related disturbance that occurs within 100 meters of the Goodding's willow riparian woodland in drainage courses that are occupied by least Bell's vireo. With the implementation of **Mitigation Measure BIO-2**, indirect construction related and permanent operational noise impacts to LBV by the proposed Project would be fully mitigated and less than significant. (GLA, 2024b, p.55-56)

Under long term conditions the residential uses are roughly 1,000 feet north of the Lake Mathews reserve lands. The proposed open space areas within the eastern and southeastern portions of the Project site and the intervening land located south and southeast of the Project site boundary would act as sufficient land use buffers to attenuate residential noise levels emanating from the Project that could adversely affect the nearby MSHCP Conservation Area. Additionally, community walls and fencing are proposed along the boundaries of the residential lot nearest the MSHCP Conservation Area, which would further attenuate residential- related noise impacts on the Conservation Area to the south/southeast. Accordingly, the Project's noise impacts to the adjacent MSHCP Conservation Area would be less than significant.

Invasive Species

Projects adjacent to the MSHCP Conservation Area are required to avoid the use of invasive plant species in landscaping, including invasive, non-native plant species listed in Volume I, Table 6-2 of the MSHCP. The provision of native plant species is required pursuant to the County's Water Efficient Landscape Ordinance 859 (Riverside County, 2023, Ord. 859), which States that "Invasive species of plants shall be avoided especially near parks, buffers, greenbelts, water bodies, conservation areas/reserves and other open space areas because of their potential to cause harm to environmentally sensitive areas." Thus, Project impacts to the MSHCP Conservation Area associated with invasive species would be less than significant. (GLA, 2024b, p. 64)

Barriers

Proposed land uses adjacent to the MSHCP Conservation Area are required to incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms. The proposed Project is not directly adjacent to an MSHCP Conservation Area and is buffered from the Conservation Area by El Sobrante Road. Nonetheless, the Project would construct community walls and fencing along the boundaries of the residential lots nearest the MSHCP Conservation Area. The proposed walls and fencing in the southern and southwestern portions of the Project site, along with the presence of El Sobrante Road, would provide sufficient barriers that would act to minimize unauthorized public access, domestic animal predation, illegal trespass, and dumping in the nearby MSHCP Conservation Area. The Project would not entail the construction of manufactured slopes that extend into the nearby MSHCP Conservation Area. Accordingly, the Project would be consistent with MSHCP Section 6.1.4 with respect to barriers, and impacts would be less than significant. (GLA, 2024b, p. 64)

Project Compliance with MSHCP Section 6.3.2 (Additional Survey Needs and Procedures)

The proposed Project site occurs within the burrowing owl survey area but does not occur within the amphibian or mammal survey areas, or within the NEPSSA or CAPSSA. Focused burrowing owl surveys were conducted for the proposed Project site, and no burrowing owls were detected. (GLA, 2024b, p. 70)

However, the Study Area is known to contain suitable habitat for the burrowing owl. Using guidance provided by MSHCP Section 6.3.2, conservation of the Project site or a portion thereof is not required based on the results of the burrowing owl survey. Due to the fact that the Project site contains suitable habitat for burrowing owls, the Project would result in a potentially-significant impact to the burrowing owl and suitable habitat for the species.

Therefore, with the implementation of **Mitigation Measure BIO-3** incorporating a pre-construction burrowing owl survey, the impacts would be less than significant. (GLA, 2024b, p. 66)

As outlined above, the proposed Project will be consistent with the biological requirements of the MSHCP; specifically pertaining to the Project's relationship to reserve assembly, Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), Section 6.1.3 (Protection of Narrow Endemic Plant Species), Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface), and Section 6.3.2 (Additional Survey Needs and Procedures). (GLA, 2024b, p. 70)

b) The least Bell's vireo is state and federally listed as endangered, and is covered under the MSHCP. The least Bell's vireo is typically associated with dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.

A single male least Bell's vireo was observed utilizing approximately 0.10 acre of Goodding's willow riparian woodland that occurs within the onsite drainage course, as well as offsite areas of suitable habitat within proximity to the projects west of the drainage course. The proposed Project will avoid all areas of occupied habitat. Proposed impacts to unoccupied portions of the drainage course occur approximately 700 feet (~210 meters) west of the single male LBV, and consist of mulefat thickets that exhibit a relatively high level of disturbance and high percent composition of non-native vegetation. Likewise, proposed impacts to unoccupied riparian habitat associated with the drainage course consist of disturbed Goodding's willow riparian woodland that also exhibits a high level of disturbance and high percent composition of non-native vegetation.

Per Section 6.1.2 of the MSHCP and the species-specific objectives for the LBV (MSHCP Volume II.B.) at least 90 percent of habitat with long-term conservation value must be avoided (includes protection mechanism such as a deed restriction, conservation easement, etc.) for the LBV and that projects implement 100meters of undeveloped landscape adjacent to the habitat conserved.

The Project will avoid all areas of habitat with long-term conservation value for LBV (0.10 acre of occupied Goodding's willow riparian woodland). The Project currently implements a setback of approximately 40 meters from areas of occupied habitat within the drainage course, however, that portion of the drainage is deeply incised and while it is expected to provide a topographical buffer to any potential visual and/or noise-related disturbance associated with the proposed Project, the potential for indirect impacts to LBV cannot be ruled out, specifically noise. With MSHCP compliance, and proposed **Mitigation Measure BIO-2**, indirect construction and permanent operational related noise impacts to LBV by the proposed Project would be fully mitigated and less than significant. (GLA, 2024b, p.55-56)

c) Provided below is a discussion of the Project's potential impacts to species identified as a candidate, sensitive, or special species either directly or through habitat modifications:

Special-Status Plants

The Project site does not support any special-status plants. Therefore, there would be no impact on special-status plants associated with the Project. (GLA, 2024b, p. 55)

Special-Status Animals

The Project site supports special-status animal species, including the state and federally listed endangered least Bell's vireo, and state designated species of special concern; pocketed free- tailed bat and western yellow bat. Species of special concern with potential to occur onsite include coastal whiptail, red-diamond rattlesnake, loggerhead shrike and yellow warbler. (GLA, 2024b, p.55)

Impacts to Listed Species

Least Bell's Vireo – As discussed in Section 7(b) a single male least Bell's vireo was observed utilizing approximately 0.10 acre of Goodding's willow riparian woodland that occurs within the onsite drainage

course, as well as offsite areas of suitable habitat within proximity to the projects west of the drainage course.

Per Section 6.1.2 of the MSHCP and the species-specific objectives for the LBV (MSHCP Volume II.B.) at least 90 percent of habitat with long-term conservation value must be avoided (includes protection mechanism such as a deed restriction, conservation easement, etc.) for the LBV and that projects implement 100meters of undeveloped landscape adjacent to the habitat conserved.

The Project will avoid all areas of habitat with long-term conservation value for LBV (0.10 acre of occupied Goodding's willow riparian woodland). The Project currently implements a setback from the drainage course, however, the potential for indirect impacts LBV specific to noise cannot be ruled out. With MSHCP compliance, and proposed **Mitigation Measure BIO-2**, indirect noise impacts to LBV by the proposed Project would be fully mitigated and impacts would be less than significant. (GLA, 2024b, p.55-56)

Impacts to Non-Listed Species

In addition to the listed species discussed above, the proposed Project would impact habitat for other non-listed, special-status species that have either been observed on the Project footprint, or that have the potential to occur. The analysis presented in this section is split into those listed species covered by the MSHCP and those that are not covered by the MSHCP. (GLA, 2024b, p.56)

MSHCP Covered Non-Listed Species

Burrowing Owl - As burrowing owls were not observed within the Project site during focused surveys, proposed impacts to this species from development of the Project would not result in impacts to burrowing owl. However, due to the mercurial nature of the species, a pre- construction burrowing owl survey is required by Section 6.3.2 of the MSHCP. Therefore, with the implementation of **Mitigation Measure BIO-3** incorporating a pre-construction burrowing owl survey, the impacts would be less than significant.

Loggerhead shrike - Proposed impacts caused by the Project to loggerhead shrike would be potentially significant under CEQA, as a result of the loss of nesting and foraging habitat (red brome grassland, brittlebush scrub and four-wing saltbush scrub) that occurs throughout the majority of the 85.96 acre impact footprint. Loggerhead shrike has declined appreciably in western Riverside County and the loss of potential for this species by development of the Project would be potentially significant under CEQA.

Loggerhead shrike is designated as a "Fully Covered Species" under the MSHCP. Focused surveys are not required. With compliance with the MSHCP, including MSHCP fee payment, impacts to loggerhead shrike would be reduced to a level of less than significant under CEQA. (GLA, 2024b, p.56)

Yellow warbler - The Project would impact approximately 0.37 acre of potential nesting and foraging habitat (Goodding's willow riparian woodland and mulefat thickets) for yellow warbler. This species inhabits riparian ecosystems and woodland habitats which have declined greatly over past decades. The removal of nesting habitat and foraging habitat for the species would be potentially significant under CEQA.

Yellow warbler is designated as "Fully Covered Species" under the MSHCP. Focused surveys are not required. With compliance with the MSHCP, including MSHCP fee payment, impacts to yellow warbler would be reduced to a level of less than significant under CEQA. (GLA, 2024b, p.56)

Coastal whiptail – The Project would impact approximately 10 acres of suitable habitat (four- wing saltbush scrub and brittle bush scrub) for coastal whiptail. Proposed impacts to coastal whiptail would be less than significant under CEQA. This is based on the number of individuals potentially affected, the species role within suitable habitat occurring at the Project site, and/or whether the species remains "common" to the region.

Regardless, these species are designated as "Covered Species" under the MSHCP, with any potential impacts mitigated by the Plan. (GLA, 2024b, p.56)

Red-diamond rattlesnake - The Project would impact approximately 10 acres of suitable habitat (four-wing saltbush scrub and brittle bush scrub) for red-diamond rattlesnake. Proposed impacts to red-diamond rattlesnake would be less than significant under CEQA. This is based on the number of individuals potentially affected, the species role within suitable habitat occurring at the Project site, and/or whether the species remains "common" to the region.

Regardless, these species are designated as "Covered Species" under the MSHCP, with any potential impacts mitigated by the Plan. (GLA, 2024b, p.56)

<u>MSHCP Non-Covered Non-Listed Species</u>

Pocketed free-tailed bat - The Project would result in impacts to approximately 0.37 acre of potential foraging habitat (Goodding's willow riparian woodland and mulefat thickets) for pocketed free-tailed bat. The Project will not result in impacts to roosting habitat for pocketed free-tailed bat. Proposed impacts to pocketed free-tailed bat foraging habitat would not be CEQA significant because of the large amount of potential foraging habitat that would remain in close vicinity (e.g. Lake Mathews Reserve) south of El Sobrante Road and the amount of drainage courses that would be avoided and/or proposed for onsite mitigation for impacts to riparian/riverine areas.

Therefore, with the implementation of **Mitigation Measure BIO-4** incorporating a pre-construction bat roost survey, the impacts would be less than significant. (GLA, 2024b, p.57)

Western yellow bat - The Project would result in impacts to approximately 0.37 acre of potential foraging habitat (Goodding's willow riparian woodland and mulefat thickets) for western yellow bat. The Project will not result in impacts to roosting habitat for western yellow bat (potential roosting habitat is located offsite). Proposed impacts to western yellow bat foraging habitat would not be CEQA significant because of the large amount of potential foraging habitat that would remain in close vicinity (e.g. Lake Mathews Reserve) south of El Sobrante Road and the amount of drainage courses that would be avoided and/or proposed for onsite mitigation for impacts to riparian/riverine areas.

Therefore, with the implementation of **Mitigation Measure BIO-4** incorporating a pre-construction bat roost survey, the impacts would be less than significant. (GLA, 2024b, p.57)

d) The proposed Project would remove live-in habitat for wildlife and would restrict the local movement of wildlife within and through the Project site. It is not expected that this impact would be a potentially significant impact to wildlife movement. Additionally, the Project site does not occur within a designated MSHCP Linkage or Constrained Linkage, and the Project site is not critical for regional wildlife movement as recognized by the MSHCP, and as such, impacts to wildlife movement would be mitigated to a level of less than significant through compliance with the MSHCP. (GLA, 2024b, p. 59)

The Project has the potential to result in indirect impacts to a canyon bat maternity roost located in the eucalyptus groves associated with the drainage courses. Potential impacts to a canyon bat maternity roost would be considered significant, however, with the implementation of **Mitigation Measure BIO-4** incorporating a pre-construction bat roost survey, the impacts would be less than significant. (GLA, 2024b, p. 59)

The Project has the potential to impact active bird nests if vegetation is removed during the nesting season (February 1 to September 15). Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code. Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code, impacts to native birds by the proposed Project would not be a significant impact under CEQA. The native birds with potential to nest on the Project site would be those that are extremely common to the region and highly adapted to human landscapes (e.g., house finch, killdeer). The number of individuals potentially affected by the Project would not significantly affect regional, let alone local populations of such species, however any protentional impacts with nesting birds would addressed with the implementation of **Mitigation Measure BIO-5** incorporating a nesting bird survey prior to ground disturbance and the impacts would be less than significant. (GLA, 2024b, p. 59)

e) The Project site consists of 0.16 acre of wetlands subject to Corps and Regional Board jurisdiction, of which 0.16 acres is located within the Project identified drainage courses. The Project will impact approximately 0.07 acres of wetlands with the drainage courses, all impacts being for roadway improvements. Impacts to 0.07 acre of wetland would be considered significant, but with mitigation the impacts would be reduced to less-than-significant. (GLA, 2024b, p.57)

Because impacts to Corps jurisdiction, which total 0.10 acre of waters of the U.S. of which 0.07 consists of jurisdictional wetlands, and 0.28 acre of Regional Board jurisdiction, of which 0.07 consists of wetlands, are substantially less than impacts to CDFW and MSHCP Riparian River areas as 0.65 acres of which 0.38 acres is riparian habitat, mitigation proposed for CDFW and MSHCP Riparian/Riverine areas will provide full compensation for impacts to Corps and Regional Board jurisdiction including to state and federal wetland totaling 0.07 acre. (GLA, 2024b, p.68)

Therefore, with the implementation of **Mitigation Measure BIO-1** incorporating the re-establishment of on-site jurisdictional wetlands, the impacts would be less than significant.

f) The project will not conflict with any local policies or ordinances protecting biological resources. (GLA, 2024b, p.59)

Mitigation: The following **BIO Mitigation Measures** are required:

BIO-1

Permanent impacts to 0.63 acre of MSHCP Riparian/Riverine areas and temporary impacts to 0.024 acre (totaling 0.65 acre of impacts) would be mitigated onsite at a ratio of 3:1 (1.95 acres) through a combination of enhancement, rehabilitation, and establishment of riparian habitat including Goodding's willow riparian woodland and mulefat scrub. This would include mitigation for wetland impacts totaling 0.07 acre, which at 3:1 would comprise a total of 0.21 acre of jurisdictional wetlands within the overall 1.95-acre mitigation area in accordance with a DBESP analysis submitted to the wildlife agencies (USFWS, CDFW) having approved impacts to MSHCP riparian/riverine areas.

The developer will have prepared a Habitat Mitigation and Monitoring Plan (HMMP) by a qualified biologist that will contain the following components to ensure that the proposed mitigation fully compensates for the proposed impacts:

- Maps showing the areas to be restored that would include areas for enhancement, rehabilitation and reestablishment of wetland and riparian habitat, by alliance or habitat type (including wetlands) to ensure that there is no-net-loss of wetlands associated with the project
- Site Preparation Requirements
- Methods for enhancement and rehabilitation
- Cost table for implementation of the proposed enhancement, rehabilitation and reestablishment
- Inventory of non-native species to be removed including total removal acreage for each non-native species
- The HMMP will be prepared in accordance with the DBESP analysis submitted to the wildlife agencies (USFWS, CDFW) having approved impacts to MSHCP riparian/riverine areas.

BIO-2

Prior to conducting any grading or noise-generating Project-related disturbance that may exceed 60 dBA, a temporary noise-attenuating wall will be erected along portions of the Project boundary that occur within 100 meters of the occupied portion of drainage courses of occupied habitat for Least Bell's Vireo.

Prior to the release of occupancy for any residences within 70 meters of the occupied LBV habitat within Drainage B, the Project will include a permanent noise attenuating solid block wall, at least six feet in height, along the perimeter of the permanent impact boundary of the occupied LBV habitat within Drainage B (depicted on Figure 7.1, below).

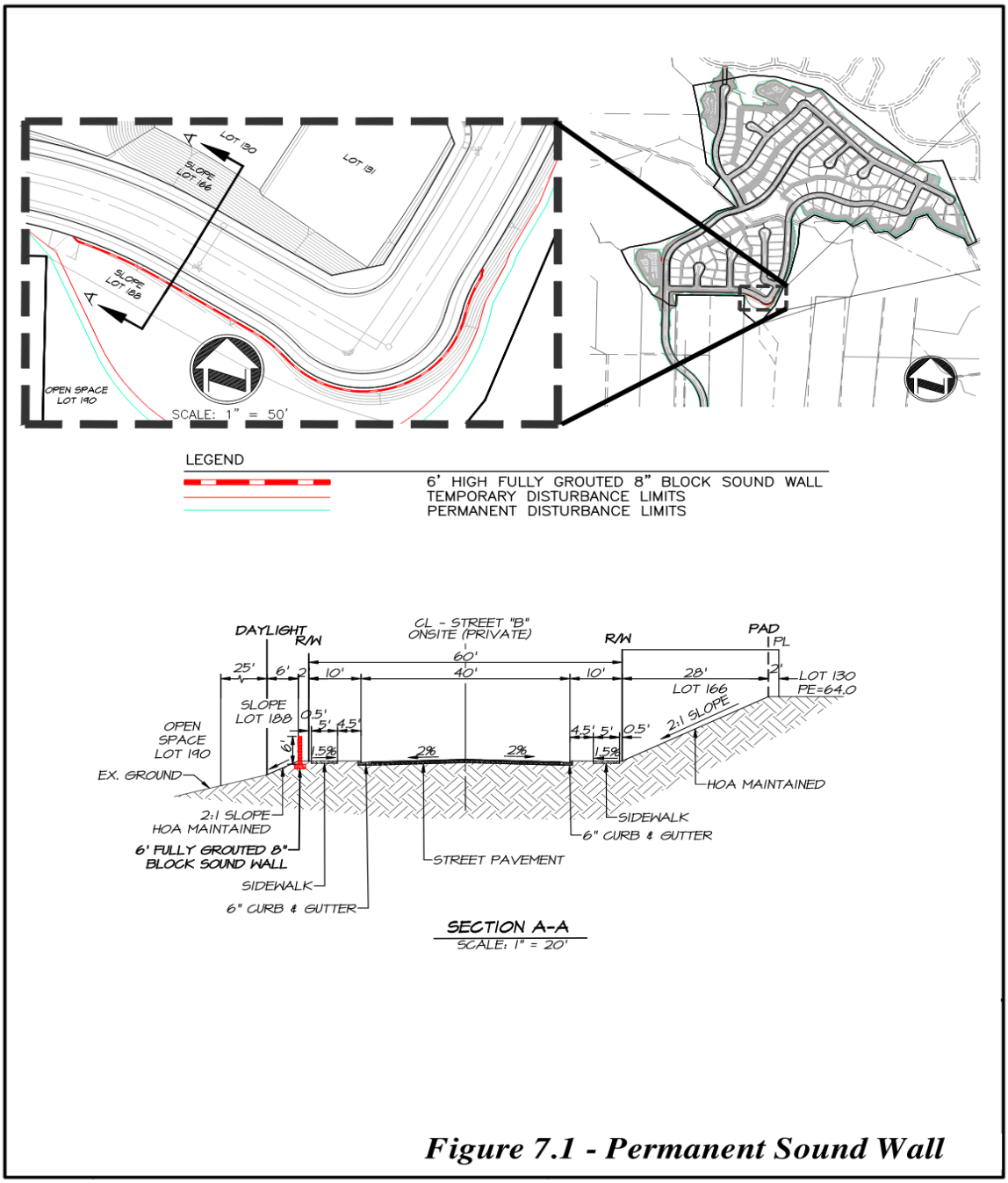


Figure 7.1 - Permanent Sound Wall

BIO-3

A 30-day pre-construction survey for burrowing owls is required prior to future ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, etc.) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the Project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the Regional Conservation Authority (RCA) and the Wildlife Agencies and will need to coordinate in the future with the RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground- disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre- construction survey will again be necessary to ensure that burrowing owl have not colonized the site since it was last disturbed. If burrowing owls are found, the same coordination described above will be necessary.

BIO-4

A qualified biologist will conduct a pre-construction bat roost survey for roosting bats no more than 14 days prior to site disturbance. The pre-construction bat roost survey will consist of a minimum of three bat surveys (conducted consecutively or as determined by the biologist). If roosting bats are detected within the Project footprint, outside of the bat maternity season, the roost tree will be removed in a manner to avoid and/or minimize injury to roosting bats. This may include using mechanical equipment to gently nudge the tree trunk multiple times prior to removal or for palm trees and other species, to de-frond or de-branch the tree using a mechanical lift and gently lower the cut branches to the ground. Regardless of the method, the fallen tree and/or material will be left undisturbed overnight until at least the next morning to give roosting bats time to exit before site disturbance.

If roosting bats are detected onsite during the maternity season (April 15 through August 14), the Project will avoid the subject roost(s) and incorporate an avoidance buffer (as determined by a qualified biologist) until after the maternity season or until a qualified biologist determines no maternity roosting is occurring. Once the qualified biologist approves removal of the subject roost tree(s), the same tree removal procedures as outlined above will be implemented prior to tree removal.

BIO-5

As feasible, vegetation clearing should be conducted outside of the nesting season, which is generally identified as February 1 through September 15. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Typical buffers for songbirds and raptors are 300 feet and 500 feet respectively, and should be confirmed by a qualified biologist during construction operations.

Monitoring:

A qualified biologist will be retained under contract and will conduct the pre-construction surveys and any ongoing monitoring and reporting during construction as identified within the mitigation measures and/or Habitat Mitigation Monitoring Plan (HMMP).

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES Would the project:				
8. Historic Resources a) Alter or destroy a historic site?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?	☐	☐	☐	☒

Source(s): Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County General Plan EIR No. 441, Figure 4.7.2 (Riverside County 2020b); Phase I/II Environmental Site Assessment Update Report (GeoScience, 2023); Phase I/II Cultural Resources Assessment Update for the TR38605 Project (BFSA, 2023a)

Findings of Fact:

a) Under existing conditions, the Project site contains one demolished residential structure (remnants of the existing foundation remain), and some remnant components of the previous agricultural (orchard) use of the Project site, including a water holding pond, water extraction wells and storage tanks. Based on a review of historical aerial photographs provided in the Phase I/II Environmental Site Assessment prepared by McAlister GeoScience the Project site was formerly developed as an orchard from the late-1960s through the mid-1990s. (GeoScience, 2023, p. i) The residential structure appears to have been constructed concurrent with the development of the orchard use within the Project site. The 1948 aerial photographs indicated that a large amount of grading has occurred in the northwest corner of the property. By 2009, the property was largely cleared of the orchards and has remained fallow. As of 2016 the existing structure no longer exists. (BFSA, 2023a, p. 4.0-10)

The demolished residential structure is located in the eastern portion of the Project site and consists of a single-story residential structure with one smaller out building. (GeoScience, 2023, p. 7) Photographs of the residential structure that were included in the Phase I/II Environmental Site Assessment demonstrate that the residence represented a non-descript architectural style typical of thousands of similar homes constructed in the 1960s throughout Southern California and did not display any unique architectural elements. Additionally, the remnant components of the previous orchard use represent utilitarian facilities that are common among other similar citrus orchard uses within Riverside County and the greater Southern California area. Based on the foregoing, the demolished residence and remnant orchard components are not particularly unique or representative of the time period in which they were constructed or utilized and have a less than significant impact.

b) No historical sites were identified during field surveys conducted by BFSA. Due to a lack of unique historical sites identified within the Project based on the criteria listed in CEQA Guidelines § 15064.5, there is no impact on the project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Archaeological Resources				
a) Alter or destroy an archaeological site?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Source(s): Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County General Plan EIR No. 441, Figure 4.7.1 (Riverside County 2020b); CA Senate Bill 18 (SB 18, 2004); CA Assembly Bill 52 (AB 52, 2014); Phase I/II Environmental Site Assessment Update Report (GeoScience, 2023); Phase I/II Cultural Resources Assessment Update for the TR38605 Project (BFSA, 2023a)

Findings of Fact:

a) The Phase I and II Cultural Resources Survey conducted by BFSA identified two prehistoric archaeological sites at the Project site, which include one prehistoric quartz lithic artifact scatters (P-33-26654/RIV-12553) and one (1) bedrock milling feature site (P-33-26658/RIV-12,557). Due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 15064.5, BFSA concluded that it is likely the two (2) sites do not comprise significant pre-historic archeological resources. However, with the sites being documented cultural resources all attempts to avoid and protect should be implemented, therefore with the implementation of **Mitigation Measure CUL-1** for the avoidance and relocation of these identified resources the impacts would be less than significant. (BFSA, 2023a, p. 5.0-1)

b) Although no known significant archaeological resource sites would be impacted by the Project, there is a possibility that archaeological resources may be present beneath the site's subsurface, and may be impacted by future ground-disturbing construction activities associated with the Project. Due to the potential to discover significant archaeological resources within the Project boundaries, which could be significantly impacted if not properly identified and treated, a potentially significant impact to subsurface prehistoric resources would occur, however with the implementation of **Mitigation Measure CUL-2** the impacts would be less than significant. (BFSA, 2023a, p. 5.0-1)

c) The Project site does not contain a cemetery and no known cemeteries are located within the immediate site vicinity. Field surveys conducted on the Project site by BFSA did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site. Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction.

If human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code, § 7050.5, "Disturbance of Human Remains." According to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public

Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. With mandatory compliance to California Health and Safety Code § 7050.5 and Public Resources Code § 5097.98, any potential impacts to human remains, including human remains of Native American descent, would be less than significant and mitigation is not required.

Mitigation: The following **CUL Mitigation Measures** are required:

CUL-1

The developer will avoid and protect in place during construction the bedrock milling feature (P-33-26658/RIV-12,557) located on the Project Site. Prior to disturbance of the prehistoric quartz lithic artifact scatters (P-33-26654/RIV-12553) located on the Project Site during grading, a qualified archaeologist and/or consulting tribe shall examine the area for any remnants of significance and relocate those items directly adjacent to the bedrock milling feature (P-33-26658/RIV-12,557) for permanent avoidance and protection in place during construction.

CUL-2

The developer will have prepared a Mitigation Monitoring and Reporting Program (MMRP) to mitigate potential impacts to undiscovered buried cultural resources within the Project area be implemented to the satisfaction of the lead agency. This program shall include, but not be limited to, the following actions:

- Prior to issuance of a grading permit, the applicant shall provide written verification in the form of a letter from the project archaeologist to the lead agency stating that a certified archaeologist has been retained to implement the monitoring program.

- The project applicant shall provide Native American monitoring during grading. The Native American monitor shall work in concert with the archaeological monitor to observe ground disturbances, protect known cultural resources, and search for cultural materials. Specifically, a representative from Pechanga Band of Indians and the Soboba Band of Luiseno Indians will be retained under contract and will provide for any monitoring during construction deemed necessary as identified during the AB523 Tribal Consultation, any unanticipated finds will be handled in a timely and culturally appropriate manner.

- The certified archaeologist shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program.

- During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and tribal representative shall be on-site, as determined by the consulting archaeologist, to perform periodic inspections of the excavations. The frequency of inspections will depend upon the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The consulting archaeologist shall have the authority to modify the monitoring program if the potential for cultural resources appears to be less than anticipated.

- Isolates and clearly non-significant deposits will be minimally documented in the field so the monitored grading can proceed.

- In the event that previously unidentified cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance operation in the area of discovery to allow for the evaluation of potentially significant cultural resources. The archaeologist shall contact the lead agency at the time of discovery. The archaeologist, in consultation with the lead agency, shall determine the significance of the discovered resources. The lead agency must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the lead agency before being carried out using professional archaeological methods. If any human bones are discovered, the county coroner and lead agency shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains.

- Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The project archaeologist shall determine the amount of material to be recovered for an adequate artifact sample for analysis.

- All cultural material collected during the grading monitoring program shall be processed and curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility, to be accompanied by payment of the fees necessary for permanent curation.

Monitoring:

A qualified archaeologist will be retained under contract and will conduct any ongoing monitoring during construction as identified within the mitigation measures and/or Mitigation Monitoring and Reporting Plan (MMRP).

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ENERGY Would the project:				
10. Energy Impacts a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Source(s): Riverside County General Plan, Riverside County Climate Action Plan ("CAP") (Riverside County, 2019), Project Application Materials; Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis (Vista Environmental, 2023)

Findings of Fact:

a) The proposed project would impact energy resources during construction and operation. Energy resources that would be potentially impacted include electricity, natural gas, and petroleum-based fuel supplies and distribution systems. This Project analysis includes a discussion of the potential energy impacts of the proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy for both construction energy and operational energy. (Vista Environmental, 2023, p. 64)

Construction Energy

The construction activities for the proposed project are anticipated to include site preparation and grading up to 85.34 acres of the 96.96-acre project site plus up to 2.8 acres of offsite area, building construction of 163 single-family homes and a City Park, paving of the onsite roads and offsite access roads, sidewalks and hardscapes, and application of architectural coatings. The proposed project would consume energy resources during construction in three (3) general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, as well as delivery and haul truck trips (e.g. hauling of dirt and gravel to and from the project site);
2. Electricity associated with the conveyance of water that would be used during project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and,
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.
(Vista Environmental, 2023, p. 65)

Construction-Related Electricity

During construction the proposed project would consume electricity to construct the proposed residential development. Electricity would be supplied to the project site by Southern California Edison and would be obtained from the existing electrical lines in the vicinity of the project site. The use of electricity from existing power lines rather than temporary diesel or gasoline powered generators would minimize impacts on fuel consumption. Electricity consumed during project construction would vary throughout the construction period based on the construction activities being performed. Various construction

activities include electricity associated with the conveyance of water that would be used during project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power. Such electricity demand would be temporary, nominal, and would cease upon the completion of construction. Overall, construction activities associated with the proposed project would require limited electricity consumption that would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during project construction would not be wasteful, inefficient, or unnecessary. (Vista Environmental, 2023, p. 65)

Since there are currently power lines in the vicinity of the project site, it is anticipated that only nominal improvements would be required to Southern California Edison Utility distribution lines and equipment with development of the proposed project. Compliance with County's guidelines and requirements would ensure that the proposed project fulfills its responsibilities relative to infrastructure installation, coordinates any electrical infrastructure removals or relocations, and limits any impacts associated with construction of the project. Construction of the project's electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity. (Vista Environmental, 2023, p. 65)

Construction-Related Natural Gas

Construction of the proposed project typically would not involve the consumption of natural gas. Natural gas would not be supplied to support construction activities, thus there would be no demand generated by construction. Since the project site is adjacent to roads that currently have natural gas lines, construction of the proposed project would be limited to installation of new natural gas connections within the project site. Development of the proposed project would likely not require extensive infrastructure improvements to serve the project site. Construction-related energy usage impacts associated with the installation of natural gas connections are expected to be confined to trenching in order to place the lines below surface. In addition, prior to ground disturbance, the proposed project would notify and coordinate with SoCalGas to identify the locations and depth of all existing gas lines and avoid disruption of gas service. Therefore, construction-related impacts to natural gas supply and infrastructure would be less than significant. (Vista Environmental, 2023, p. 65)

Construction-Related Petroleum Fuel Use

Petroleum-based fuel usage represents the highest amount of transportation energy potentially consumed during construction, which would be utilized by both off-road equipment operating on the project site and on-road automobiles transporting workers to and from the project site and on-road trucks transporting equipment and supplies to the project site. (Vista Environmental, 2023, p. 66)

The off-road construction equipment fuel usage was calculated through use of the off-road equipment assumptions and fuel use assumptions, which found that construction of the proposed project would consume 33,295 gallons of gasoline and 192,524 gallons of diesel fuel. This equates to 0.003 percent of the gasoline and 0.13 percent of the diesel consumed annually in Riverside County. As such, the construction-related petroleum use would be nominal, when compared to current county-wide petroleum usage rates. (Vista Environmental, 2023, p. 66)

Construction activities associated with the proposed project would be required to adhere to all State and SCAQMD regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency

standards. As such, construction activities for the proposed project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. Impacts regarding transportation energy would be less than significant. Development of the project would not result in the need to manufacture construction materials or create new building material facilities specifically to supply the proposed project. It is difficult to measure the energy used in the production of construction materials such as asphalt, steel, and concrete, it is reasonable to assume that the production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business. (Vista Environmental, 2023, p. 66)

Operational Energy

The on-going operation of the proposed project would require the use of energy resources for multiple purposes including, but not limited to, heating/ventilating/air conditioning (HVAC), refrigeration, lighting, appliances, and electronics. Energy would also be consumed during operations related to water usage, solid waste disposal, landscape equipment and vehicle trips. (Vista Environmental, 2023, p. 66)

Operations-Related Electricity

Operation of the proposed project would result in net zero electricity usage with implementation of Title 24 Part 6 requirements that require the implementation of building energy efficiency standards that include a variety of measures to make new homes more energy efficient and also requires the installation of photovoltaic systems of adequate size to generate enough electricity to meet the zero-net energy use standard. The size of the PV system required for the project pursuant to the 2019 Title 24 standards was calculated, which found that the proposed project would need to install at least 733.5 Kilowatts of photovoltaic panels within the proposed project. (Vista Environmental, 2023, p. 66)

Therefore, it is anticipated the proposed project will be designed and built to minimize electricity use and that existing and planned electricity capacity and electricity supplies would be sufficient to support the proposed project's electricity demand. Thus, impacts with regard to electrical supply and infrastructure capacity would be less than significant and no mitigation measures would be required. (Vista Environmental, 2023, p. 67)

Operations-Related Natural Gas

Operation of the proposed project would result in increased consumption of natural gas at the project site. The proposed project would consume 5,797 MBTU per year of natural gas. This equates to 0.013 percent of the natural gas consumed annually in Riverside County. As such, the operations-related natural gas use would be nominal, when compared to current natural gas usage rates in the County. (Vista Environmental, 2023, p. 67)

It should be noted that, the proposed project would comply with all Federal, State, and County requirements related to the consumption of natural gas, that includes CCR Title 24, Part 6 Building Energy Efficiency Standards and CCR Title 24, Part 11: California Green Building Standards. The CCR Title 24, Part 6 and Part 11 standards require numerous energy efficiency measures to be incorporated into the proposed structures, including enhanced insulation as well as use of efficient natural gas appliances and HVAC units. Therefore, it is anticipated the proposed project will be designed and built to minimize natural gas use and that existing and planned natural gas capacity and natural gas supplies would be sufficient to support the proposed project's natural gas demand. Thus, impacts with regard to natural gas supply and

infrastructure capacity would be less than significant and no mitigation measures would be required. (Vista Environmental, 2023, p. 67)

Operations-Related Vehicular Petroleum Fuel Usage

Operation of the proposed project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the project site. The proposed project would consume 221,023 gallons of gasoline fuel per year from vehicle travel. This equates to 0.021 percent of the gasoline consumed in Riverside County annually. As such, the operations-related petroleum use would be nominal, when compared to current petroleum usage rates. (Vista Environmental, 2023, p. 67)

It should be noted that, the proposed project would comply with all Federal, State, and City requirements related to the consumption of transportation energy that includes California Code of Regulations Title 24, Part 10 California Green Building Standards that require all new garages for the proposed homes to install electrical panels of adequate size to support the installation of electric vehicle charging systems. Therefore, it is anticipated the proposed project will be designed and built to minimize transportation energy through the promotion of the use of electric-powered vehicles and it is anticipated that existing and planned capacity and supplies of transportation fuels would be sufficient to support the proposed project's demand. Thus, impacts with regard transportation energy supply and infrastructure capacity would be less than significant and no mitigation measures would be required. (Vista Environmental, 2023, p. 67)

In conclusion, the proposed project would comply with regulatory compliance measures outlined by the State and County related to Air Quality, GHG, Transportation/Circulation, and Water Supply. Additionally, the proposed project would be constructed in accordance with all applicable County Building and Fire Codes. Therefore, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operations. Impacts would be less than significant. (Vista Environmental, 2023, p. 67)

b) The applicable energy plan for the proposed project is the County of Riverside General Plan 2035, December 8, 2015. The proposed project's consistency with the applicable energy-related policies in the General Plan are shown in Table 10.1 below:

Table 10.1 - Proposed Project Compliance with Applicable General Plan Energy Policies

Policy No.	General Plan Policy	Proposed Project Implementation Actions
AQ 4.1	Require the use of all feasible building materials/ methods which reduce emissions.	**Consistent.** The proposed homes will be designed to meet the most current Title 24 Part 6 building standards that require enhanced insulation in order to reduce energy usage and associated emissions.
AQ 4.2	Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.	**Consistent.** The proposed homes will be designed to meet the most current Title 24 Part 11 building standards that require all installed appliances to be energy efficient.
AQ 4.3	Require centrally heated facilities to utilize automated time clocks or occupant sensors to control heating where feasible.	**Consistent.** The proposed homes will be designed to meet the most current Title 24 Part 11 building standards that require the use of occupant sensors.
AQ 4.4	Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.	**Consistent.** The proposed homes will be designed to meet the most current Title 24 Part 6 and Title 24 Part 11 building standards.
AQ 5.4	Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.	**Consistent.** The proposed project has been designed to incorporate energy-efficient design elements that include site orientation and the use of shade trees to reduce fuel consumption.
AQ 20.7	Reduce VMT through increased densities in urban centers and encouraging emphasis on mixed use to provide residential, commercial and employment opportunities in closer proximity to each other. Such measures will also support achieving the appropriate jobs-housing balance within the communities. (AI 47, 53, 117, 146)	**Consistent.** The proposed project consists of development of single-family homes in an area in close proximity to existing commercial and employment areas. As such, the project will support achieving appropriate jobs-housing balance within the community.
AQ 20.8	Reduce VMT by increasing options for non-vehicular access through urban design principles that promote higher residential densities with easily accessible parks and recreation opportunities nearby. (AI 115, 117, 146)	**Consistent.** The proposed project will include a City Park that will be within walking distance of the proposed homes as well as installation of sidewalks on onsite roads as well as onto the proposed offsite access roads that will reduce VMT by providing park uses in close proximity to the proposed homes.

Table 10.1 - Proposed Project Compliance with Applicable General Plan Energy Policies (Continued)

Policy No.	General Plan Policy	Proposed Project Implementation Actions
AQ 20.9	Reduce urban sprawl in order to minimize energy costs associated with infrastructure construction and transmission to distant locations, and to maximize protection of open space. (AI 26)	**Consistent.** The proposed project is an infill development that is bordered by residential uses on two sides. As such the infrastructure in the vicinity of the project site was designed of adequate size to support the proposed project and only minimal offsite improvements to infrastructure will be required as a result of development of the proposed project.
AQ 20.10	Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design. (AI 147)	**Consistent.** The proposed project has been designed to incorporate energy-efficient design elements that include solar orientation and shading.
AQ 20.11	Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment. (AI 147)	**Consistent.** The proposed homes will be designed to meet the most current Title 24 Part 6 and Title 24 Part 11 building standards that require the installation of energy efficient lights, appliances and ventilation systems as well as the installation of low-flow fixtures and use of water efficient irrigation systems.
AQ 20.18	Encourage the installation of solar panels and other energy-efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.). (AI 147)	**Consistent.** The proposed homes will be designed to meet the most current Title 24 Part 6 building standards that require each home to install a solar PV system of adequate size to meet the net zero electricity usage requirements.

Source: County of Riverside, 2015.

As shown in Table 10.1, the proposed project would be consistent with all applicable energy-related policies from the General Plan. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant. (Vista Environmental, 2023, p. 70)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS Would the project directly or indirectly:				
11. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones a) Be subject to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure S-1 "Earthquake Fault Study Zones" (Riverside County, 2020a), Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County General Plan EIR No. 441, Figure 4.10.1 (Riverside County 2020b); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) The Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone or a County Fault Hazard Zone. There are no known active or potentially active faults on the Project site or trending toward the Project site. There are no other conditions on-site or in the surrounding area that provide evidence of any other faults that could impact the Project site. Accordingly, the Project would not be subject to rupture of a known earthquake fault as delineated on the Alquist-Priolo Earthquake Fault Zoning Map, County Fault Hazard Zone Maps, or other faults identified by the State Geologist. Impacts would be less than significant. (AGS, 2018, pp. 9-10)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

12. Liquefaction Potential Zone a) Be subject to seismic-related ground failure, including liquefaction?	☐	☒	☐	☐

Source(s): Riverside County General Plan Figure S-3 "Generalized Liquefaction" (Riverside County, 2020a); Riverside County General Plan EIR No. 441, Figure 4.10.3 (Riverside County 2020b); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) Liquefaction is the phenomenon where seismic agitation of loose, saturated sands and silty sands can result in a buildup of pore pressures that, if sufficient to overcome overburden stresses, can produce a temporary quick condition known as liquefaction. Localized, loose lenses/layers of sandy soils may be subject to liquefaction when a large, prolonged, seismic event affects a site. (AGS, 2018, p. 12)

In general, the more recent a sediment has been deposited, the more likely it is to be susceptible to liquefaction. Further, liquefaction potential is greatest in loose, poorly graded sands and silty sands with mean grain size in the range of 0.1 to 0.2 mm. Other factors that must be considered are groundwater, confining stresses, relative density, intensity, and duration of ground shaking. It is generally held that soils possessing a clay content (particle size < 0.005mm) greater than fifteen (15) to twenty (20) percent may be considered non-liquefiable. (AGS, 2018, p. 12)

Due to the dense nature of the granitic rock on site, the relatively thin veneer of granular soils, and the lack of shallow groundwater beneath the site, the Project site is not considered to be within a zone susceptible to liquefaction. However, there is a remote potential that future structures on site could be subject to liquefaction hazards in the event that future implementing developments do not comply with the recommendations of the Project's geotechnical study. Accordingly, impacts due to seismic-related ground failure, including liquefaction, would be potentially significant however with the implementation of **Mitigation Measure GEO-1**, the recommendations outlined within the Projects preliminary geotechnical evaluation, the impacts would be reduced to less than significant. (AGS, 2018, p. 12)

Mitigation: The following **GEO Mitigation Measures** are required:

GEO-1

Prior to issuance of building permits, the Director of the Riverside County Building and Safety Division (or his/her designee) shall verify that all of the recommendations given in the Project's May 25, 2018 "Updated Preliminary Geotechnical Investigation" by AGS and the September 7, 2023 Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area by Leighton, are incorporated into the construction and grading plans. The recommendations shall include, but not be limited to the following:

- Perform earthwork in accordance with the General Earthwork and Grading Specifications in Appendix D of Technical Appendix D. The recommendations contained in Appendix D of Technical Appendix D, are general grading specifications provided for typical grading projects and some of the recommendations may not be strictly applicable to the proposed Project. The specific recommendations contained in the text of this report shall supersede the general recommendations in Appendix D of Technical Appendix D.

  The contract between the Project Applicant and earthwork contractor shall be worded such that it is the responsibility of the contractor to place fill properly in accordance with the recommendations of the Geotechnical Report, the specifications in Appendix D of the Geotechnical Report, applicable County Grading Ordinances, notwithstanding the testing and observation of the geotechnical consultant during construction.

- Existing vegetation, trash, debris, and other deleterious materials shall be removed and wasted from the site prior to commencing removal of unsuitable soils and placement of compacted fill materials. Additionally, all pre-existing foundations elements, standpipes, irrigation lines, and utility conduits shall be removed and wasted off-site. Concrete can be placed in the fill provided it is broken down into pieces smaller than 12 inches (largest dimension). Cesspools and septic

systems shall be properly removed and/or backfilled in accordance with the local governing agency.

Soil, undocumented fills, alluvium, weathered portions of the older alluvium, and bedrock shall be removed in areas planned to receive compacted fill intended to support settlement-sensitive structures such as buildings, roads and underground improvements. The resulting undercuts shall be replaced with engineered fill. It shall be noted that local variations can be expected requiring an increase in the depth of removal for unsuitable and weathered deposits. The extent of removals can best be determined in the field during grading when observation and evaluation can be performed by the soil engineer and/or engineering geologist. Removal bottoms shall expose saturated (S>85%) alluvium, very old alluvial fan deposit, and/or bedrock. The removal bottom shall be observed and mapped by the engineering geologist prior to fill placement. Although unlikely, if removals are completed to saturated alluvium or older alluvium, it will require monitoring of time-dependent settlement.

- Where design grades and/or remedial grading activities create a cut/fill transition, the cut and shallow fill portions of the building pad shall be overexcavated a minimum depth of three (3) feet and replaced to design grade with compacted fill. Lots anticipated to require replacement fills due to cut/fill transitions are indicated with a © on the enclosed plans.

  All undercuts shall be graded such that a gradient of at least one (1) percent is maintained toward deeper fill areas or the front of the pad. The entire pad area of these lots shall be undercut. Replacement fills shall be compacted to project specifications.

  In order to facilitate foundation trenching and future homeowner improvements, it is recommended that all cut lots be overexcavated at least three (3) feet and capped with "select" material. Deeper undercuts are recommended in front yard areas in order to facilitate service utility construction. Lots anticipated to require replacement fills due to hard rock conditions are indicated with an ® on the enclosed plans. This undercut shall have a minimum one (1) percent gradient toward the front of the lots to allow for potential subsurface drainage. “Select” replacement material shall be eight (8) inch minus and be compacted to project specifications.

  In order to reduce the differential settlement potential on lots with steep fill or cut/fill transitions, or highly variable fill thickness, the cut or shallow fill portion of steep transitions shall be overexcavated to a depth equal to one-third (1/3) the deepest fill section within the lot to a maximum thickness of seventeen (17) feet. As an alternative to overexcavation on steep cut and cut/fill transition lots founded in hard rock, foundation design combined with increased compaction criteria can be considered. By increasing the compaction of the fill, differential settlement can be reduced.

  It is suggested that the street areas with design cut or shallow fill located in the hard bedrock areas be overexcavated a minimum of one (1) feet below the deepest utility and replaced with compacted, eight- (8) inch minus, select soils. This will facilitate the use of conventional trenching equipment for utility construction.

Where cast-in-place pipe (CIPP) is proposed, selective grading will be required. Besides a maximum rock size of 3-inches, select soils consisting of soil types SC and SM soil types are generally recommended for the "pipe zone" area where CIPP will be used. Selective grading in these areas shall be anticipated.

- Removals of unsuitable soils will be required prior to fill placement along the grading limit. A 1:1 projection, from toe of slope or grading limit, outward to competent materials shall be established, when possible. Where removals are not possible due to grading limits, property line or easement restrictions, removals shall be initiated at the grading boundary (property line, easement, grading limit or outside the improvement) at a 1:1 ratio inward to competent materials. This reduced removal criteria shall not be implemented prior to review by the Geotechnical Consultant and approval by the Owner. Where this reduced removal criteria is implemented, special maintenance zones may be necessary. These areas, if present, will need to be identified during grading. Alternatively, grading limits can be initiated offsite.

- Close geologic inspection shall be conducted during grading to observe if soil and geologic conditions differ significantly from those anticipated. Should field conditions dictate, modifications to the recommendations presented herein may be necessary and shall be based upon conditions exposed in the field during grading.

- Proposed cut slopes have been designed at slope ratios of 2:1 (horizontal to vertical). The highest proposed cut slope is approximately 45 feet. It is anticipated that slopes excavated in hard rock will be stable to the proposed heights. Stability calculations supporting this conclusion are presented on Plates D-1 through D-3. Rockfall issues can develop when large cut slopes are designed. However, unattached rounded boulders are not found frequently within the site and the site vicinity. Possible mitigations for any adverse rock fall conditions could include dedicated impact zones at the toe of slope, catchment fencing, and other restraints. All cut slopes shall be observed by the engineering geologist during grading. Modifications to the recommendations presented herein may be necessary and shall be based upon conditions exposed in the field at the time of grading.

  If conditions exposed during grading necessitate the need for stabilization fills, then the backcuts for stabilization fills shall be made no steeper than 1:1 (horizontal to vertical). Shallower backcuts may be required if conditions dictate. Final determination shall be made in the field by the project geologist. All stabilization fills will require backdrain systems as shown on Detail 3 of Appendix E to Technical Appendix D. Additional backdrains could be required in backcuts where geologic contacts daylight in the backcut. Terrace drains and benches shall be constructed on cut slopes in accordance with the County of Riverside Grading Ordinance.

- Fill slopes are designed at ratios of 2:1 (horizontal to vertical) or flatter. The highest design fill slopes are approximately 44 feet. Fill slopes, when properly constructed with onsite materials, are expected to be grossly and surficially stable as designed. Stability calculations are presented on Plates D-4 through D-6. Fill slopes constructed at 2:1 ratios or flatter can be expected to perform satisfactorily when properly constructed with onsite materials and maintained as described in Appendix E of Technical Appendix D. Marginal surficial stability may exist if slopes

are not properly maintained or are subjected to inappropriate irrigation practices. Slope protection and appropriate landscaping will improve surficial stability and shall be considered.

Keyways shall be constructed at the toe of all fill slopes toeing on existing or cut grade. Fill keys shall have a minimum width equal to fifteen (15) feet or one-half (1/2) the height of ascending slope, whichever is greater. Where possible, unsuitable soil removals below the toe of proposed fill slopes shall extend outward from the catch point of the design toe at a minimum 1:1 projection to an approved cleanout as shown on Detail 5. Backcuts shall be cut no steeper than 1:1 or as recommended by the geotechnical engineer. Terrace drains and benches shall be constructed on fill slopes in accordance with the County of Riverside Grading Ordinance.

- Where possible, skin fills or thin fill sections against natural slopes shall be avoided. If skin fill conditions are identified in the field or are created by remedial grading, it is recommended that a backcut and keyway be established such that a minimum fill thickness equal to one-half (1/2) the remaining slope height [not less than fifteen (15) feet] is provided for all skin fill conditions. This criterion shall be implemented for the entire slope height. Back-drains may be required at the heel of skin fills and would be designed based upon exposed conditions.

- Several fill over cut slopes are proposed. For fill over cut slopes, the fill portion shall not be constructed until the cut portion of the slope has been cut to finish grade. The materials and geologic structure exposed along the cut slope will be evaluated for: 1) suitability as a foundation medium; 2) suitability for receiving compacted fill; and 3) surficial and gross stability. Once the cut portion of the slope has been evaluated, it will be released for construction of the fill key or recommendations for further remedial grading will be provided. If it is determined that the exposed materials require remediation, the slope would then become a stabilization fill and shall be constructed as discussed in the protocol for cut slopes.

- The surficial stability of 2:1 cut, and fill slopes have been analyzed, and the analysis presented in Appendix D of Technical Appendix D indicates a factor-of-safety in excess of code minimums. When fill and cut slopes are properly constructed and maintained, satisfactory performance can be anticipated although slopes will be subject to erosion, particularly before landscaping is fully established.

- Temporary backcuts shall be laid back at gradients no steeper than 1:1 to heights of up to 10 feet, and 1½:1 (horizontal:vertical) for heights greater than 10 feet. Flatter backcuts may be necessary where geologic conditions dictate and where minimum width dimensions are to be maintained.

  Care shall be taken during remedial grading operations in order to minimize risk of failure. Should failure occur, complete removal of the disturbed material will be required. In consideration of the inherent instability created by temporary construction of backcuts, it is imperative that grading schedules be coordinated to minimize the unsupported exposure time of these excavations. Once started these excavations and subsequent fill operations shall be maintained to completion without intervening delays imposed by avoidable circumstances. In cases where five-day workweeks comprise a normal schedule, grading shall be planned to avoid exposing at-grade or near-grade excavations through a non-work weekend. Where

improvements may be affected by temporary instability, either on or offsite, further restrictions such as slot cutting, extending work days, implementing weekend schedules, and/or other requirements considered critical to serving specific circumstances may be imposed.

- All temporary slope excavations, including front, side and backcuts, and all cut slopes shall be mapped to verify the geologic conditions that were modeled prior to grading are consistent with the exposures during the grading. It is likely that slope stability analyses and designed keyways may have to be modified based on conditions exposed during grading.

- Six- (6) and eight- (8) inch diameter canyon subdrains are recommended along the deeper canyons on the project. The drains are to be placed along the lowest alignment of canyon removals to intercept, transport, and dispose of infiltrating water. The diameter and approximate locations of proposed subdrains are shown on Plates 1 through 4. Final determination of drain locations will be made in the field, based on exposed conditions. Drains shall be constructed in accordance with the details shown on Details 1 and 2.

  Heel drains will be required for all stabilization fill keyways and fill-over-cut keyways. Heel drains shall be constructed in accordance with the details shown on Detail 3.

  Due to the fractured nature of the bedrock, it is common for post-grading irrigation runoff to surface on cut slopes. Consideration shall be given to placing a toe drain on all major cut slopes in order to provide drainage for possible future nuisance water on the cut slopes.

  Subdrains on the cut slope face may be required if nuisance water surfaces on the slope face during grading. These drains may be tied into the toe drain if it is installed, or if no toe drains are installed, it will need to be tied to adjacent canyon subdrains or the storm drain system.

- Seepage, when encountered during grading, shall be evaluated by the Geotechnical Consultant. In general, seepage is not anticipated to adversely affect grading. If seepage is excessive, remedial measures such as horizontal drains or under drains may need to be installed. No groundwater or seepage was encountered during the investigation; therefore, seepage is not expected.

- Fill and processed natural ground shall be compacted to a minimum relative compaction of 90 percent as determined by ASTM Test Method: D 1557. All fill to be placed below fifty (50) feet from ultimate grade and/or below subdrains shall be compacted to at least 93 percent of maximum dry density. Care shall be taken that the ultimate grade be considered when determining the compaction requirements for disposal fill and "super pad" areas. Compaction shall be achieved at slightly above the optimum moisture content, and as generally discussed in the attached Earthwork Specifications.

- Removal bottoms, canyon subdrains, fill keys, backcuts, backdrains and their outlets shall be observed by the engineering geologist and/or geotechnical engineer and documented by the civil engineer prior to fill placement.

At the completion of removals, the exposed bottom shall be scarified to a depth of approximately 8 to 12 inches, moisture conditioned to above optimum moisture content and compacted in-place to the standards set forth in this report.

After removals, scarification, and compaction of in-place materials are completed, additional fill may be placed. Fill shall be placed in thin lifts [eight- (8) inch bulk], moisture conditioned to slightly above the optimum moisture content, mixed, compacted, and tested as grading progresses until final grades are attained.

- Where the natural slope is steeper than 5-horizontal to 1-vertical and where determined by the Geotechnical Consultant, compacted fill material shall be keyed and benched into competent materials.
- In order to provide thorough moisture conditioning and proper compaction, processing (mixing) of materials is necessary. Mixing shall be accomplished prior to, and as part of the compaction of each fill lift.

- Fill slopes may be constructed by preferably overbuilding and cutting back to the compacted core or by back-rolling and compacting the slope face. The following recommendations shall be incorporated into construction of the proposed fill slopes.

  Care shall be taken to avoid spillage of loose materials down the face of any slopes during grading. Spill fill will require complete removal before compaction, shaping, and grid rolling.

  Seeding and planting of the slopes shall follow as soon as practical to inhibit erosion and deterioration of the slope surfaces. Proper moisture control will enhance the long-term stability of the finish slope surface.

- Fill slopes shall be overfilled to an extent determined by the contractor, but not less than 2 feet measured perpendicular to the slope face, so that when trimmed back to the compacted core, the compaction of the slope face meets the minimum project requirements for compaction.

  Compaction of each lift shall extend out to the temporary slope face. The sloped shall be back-rolled at fill intervals not exceeding 4 feet in height unless a more extensive overfilling is undertaken.

- As an alternative to overbuilding the fill slopes, the slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Back-rolling at more frequent intervals may be required. Compaction of each fill shall extend to the face of the slope. Upon completion, the slopes shall be watered, shaped, and track-walked with a D-8 bulldozer or similar equipment until the compaction of the slope face meets the minimum project requirements. Multiple passes may be required.

- Oversized rock material [i.e., rock fragments greater than eight (8) inches] will be produced during the excavation of the design cuts and undercuts. Provided that the procedure is acceptable to the developer and governing agency, this rock may be incorporated into the compacted fill section to within three (3) feet of finish grade within residential areas and to two

(2) foot below the deepest utility in street and house utility connection areas. Maximum rock size in the upper portion of the hold-down zone is restricted to eight (8) inches. Disclosure of the above rock hold-down zone shall be made to prospective homebuyers explaining that excavations to accommodate swimming pools, spas, and other appurtenances will likely encounter oversize rock [i.e., rocks greater than eight (8) inches] below three (3) feet. Rocks in excess of eight (8) inches in maximum dimension may be placed within the deeper fills, provided rock fills are handled in a manner described below. In order to separate oversized materials from the rock hold-down zones, the use of a rock rake may be necessary.

Rock blankets consisting of a mixture of gravel, sand and rock to a maximum dimension of two (2) feet may be constructed. The rocks shall be placed on prepared grade, mixed with sand and gravel, watered, and worked forward with bulldozers and pneumatic compaction equipment such that the resulting fill is comprised of a mixture of the various particle sizes, contains no significant voids, and forms a dense, compact, fill matrix.

- Rock blankets may be extended to the slope face provided the following additional conditions are met: 1) no rocks greater than twelve (12) inches in diameter are allowed within six (6) horizontal feet of the slope face; 2) 50 percent (by volume) of the material is three-quarter-(3/4) inch minus; and 3) bankrolling of the slope face is conducted at four-
(4) foot vertical intervals and satisfies project compaction specifications.

  Rocks to maximum dimension of four (4) feet may be placed in windrows in deeper fill areas. The base of the windrow shall be excavated an equipment-width into the compacted fill core with rocks placed in single file within the excavation. Sands and gravels shall be added and thoroughly flooded and tracked until voids are filled. Windrows shall be separated horizontally by at least fifteen (15) feet of compacted fill, be staggered vertically, and separated by at least four (4) vertical feet of compacted fill. Windrows shall not be placed within ten (10) feet of finish grade, within two (2) vertical feet of the lowest buried utility conduit in structural fills, or within fifteen (15) feet of the finish slope surface unless specifically approved by the developer, geotechnical consultant, and governing agency.

  Rocks in excess of four (4) feet, but no greater than eight (8) feet may be buried in the compacted fill mass on an individual basis. Rocks of this size may be buried separately within the compacted fill by excavating a trench and covering the rock with sand/gravel, and compacting the fines surrounding the rock. Distances from slope face, utilities, and building pad areas (i.e., hold-down depth) shall be the same as windrows.

  Prior to implementation, the grading contractor shall consider the amount of available rock disposal volume afforded by the design when excavation techniques and grading logistics are formulated. Rock disposal techniques shall be discussed and approved by the geotechnical consultant and developer.

- Haul roads, ramp fills, and tailing areas shall be removed prior to placement of fill.

- Import materials, if required, shall have similar engineering characteristics as the onsite soils, and shall be approved by the soil engineer at the source prior to importation to the site.

- All utility trenches shall be shored or laid back in accordance with applicable OSHA standards. Excavations in bedrock areas shall be made in consideration of underlying geologic structure. The project geotechnical consultant shall be consulted on these issues during construction.

  Mainline and lateral utility trench backfill shall be compacted to at least 90 percent of maximum dry density as determined by ASTM D1557. Onsite soils will not be suitable for use as bedding material but will be suitable for use in backfill, provided oversized materials are removed. No surcharge loads shall be imposed above excavations. This includes spoil piles, lumber, concrete trucks, or other construction materials and equipment. Drainage above excavations shall be directed away from the banks. Care shall be taken to avoid saturation of the soils.

  Compaction shall be accomplished by mechanical means. Jetting of native soils will not be acceptable. Under-slab trenches shall also be compacted to project specifications. If native soils are used, mechanical compaction is recommended. If select granular backfill (SE> 30) is used, compaction by flooding will be acceptable. The soil engineer shall be notified for inspection prior to placement of the membrane and slab reinforcement.

- Precise building products, loading conditions, and locations are not currently available. It is expected that for typical one to three story residential products and loading conditions (1 to 3 ksf for spread and continuous footings), conventional shallow slab-on-grade foundations will be utilized in areas with low expansive and shallow fill areas (<50 feet).

  Upon the completion of rough grading, finish grade samples shall be collected and tested to develop specific recommendations as they relate to final foundation design recommendations for individual lots. These test results and corresponding design recommendations shall be presented in a Final Rough Grading Report.

  It is anticipated that the as-graded near-surface soils could vary from "very low" to "medium" in expansion potential with the majority of the lots consisting of "very low" to "low."

- It is anticipated that wood-frame residential structures with shallow foundations will be constructed for this Project. Detailed structural plans, loading conditions and structural sittings are not currently available; however, it can be expected that residential structures can be supported on conventional shallow foundations with slab-on-grade or post- tensioned slab/foundation systems. The design of foundation systems shall be based on as- graded conditions as determined after grading completion. The following values may be used in preliminary foundation design:

  Allowable Bearing: 2,000 lbs./sq.ft. (assuming a minimum embedment depth of 12 inches and a minimum width of 12 inches).

  Lateral Bearing: 350 lbs./sq.ft. per foot of depth to a maximum of 2,000 lbs./sq.ft. (based on level conditions at the toe) 150 lbs./sq.ft. per foot of depth to a maximum of 1,500 lbs./sq.ft. (based on descending 2:1 slope at the toe)

Sliding Coefficient: 0.35

The above values may be increased as allowed by Code to resist transient loads such as wind or seismic. Building code and structural design considerations may govern. Depth and reinforcement requirements shall be provided by the structural engineer.

- Based upon the observed soil conditions, the expansion potential categories for the building pads are anticipated to range from "Very Low" to "Low". Conventional foundation systems shall be designed in accordance with 2016 CBC guidelines and recommendations provided in Table 8.2.1 of Technical Appendix D.

- Post-tensioned foundations may be designed using the values provided in Table 8.2.2 of Technical Appendix D. For preliminary estimating purposes, post-tensioned foundations shall be designed assuming "Low" expansion potential. However, final post-tensioned foundations design recommendations shall be based on as-graded conditions.

  Design and construction of post-tensioned foundations shall be undertaken by firms experienced in this field. It is the responsibility of the foundation design engineer to select the design methodology and properly design the foundation system for site-specific soils conditions. The slab designer shall provide deflection potential to the Project architect/structural engineer for incorporation into the design of the structure.

- In addition to the potential effects of expansive soils, the proposed residential structures in shallow fills (fill depth less than 50 feet) shall be designed for a total settlement of 3/4 inch and differential settlement 3/8 inch in twenty (20) feet. Residential structures on deep fills (fill depth greater than 50 feet) shall be designed for a total settlement of 1-inch and differential settlement ½ inch in twenty (20) feet.

- Isolated footings outside the structure footprint shall be tied with grade beams to the structure in two orthogonal directions.

- In addition to the potential effects of expansive soils, the proposed residential structures in shallow fills (fill depth less than 50 feet) shall be designed for a total settlement of 3/4- inch and differential settlement 3/8 inch in twenty (20) feet. Residential structures on deep fills (fill depth greater than 50 feet) shall be designed for a total settlement of 1-inch and differential settlement ½ inch in twenty (20) feet.

- It is generally recognized that improvements constructed in proximity to natural slopes or properly-constructed slopes can, over a period of time, be affected by natural processes including gravity forces, weathering of surficial soils, and long-term (secondary) settlement. In accordance with the 2016 CBC guidelines, where foundations for residential structures are to exist in proximity to slopes, the footings should be embedded to satisfy the requirements presented in Figure 4 of Technical Appendix D.

- The geotechnical consultant shall observe footing excavations. Spoils from the footing excavations shall not be placed on slab-on-grade areas unless the soils are properly compacted.

The footing excavations shall not be allowed to dry back and shall be kept moist until concrete is poured. The excavations shall be free of all loose and sloughed materials, be neatly trimmed, and moisture conditioned at the time of concrete placement.

- A grade beam reinforced continuously with the garage footings shall be constructed across the garage entrance, tying together the ends of the perimeter footings and between individual spread footings. This grade beam shall be embedded at the same depth as the adjacent perimeter footings. A thickened slab, separated by a cold joint from the garage beam, shall be provided at the garage entrance. The thickened edge shall be a minimum of 6 inches deep.

- A moisture and vapor retarding system shall be placed below the slabs-on-grade in portions of the structure considered to be moisture sensitive. The retarder shall be of suitable composition, thickness, strength and low permeance to effectively prevent the migration of water and reduce the transmission of water vapor to acceptable levels. Historically, a 10-mil plastic membrane, such as Visqueen, placed between 1 to 4 inches of clean sand, has been used for this purpose. More recently Stego® Wrap or similar underlayments have been used to lower permeance to effectively prevent the migration of water and reduce the transmission of water vapor to acceptable levels. The use of this system or other systems, materials or techniques can be considered, at the discretion of the designer, provided the system reduces the vapor transmission rates to acceptable levels.

- Retaining wall foundations shall be supported on compacted fill and may be designed in accordance with the recommendations provided in the Preliminary Foundation Design Recommendations, included above and in Technical Appendix D. When calculating lateral resistance, the upper 12 inches of soil cover shall be ignored in areas that are not covered with hardscape. Retaining wall footings shall be designed to resist the lateral forces by passive soil resistance and/or base friction as recommended for foundation lateral resistance.

  Retaining walls shall be designed to resist earth pressures presented in Table 8.1.3 of Technical Appendix D. When calculating lateral resistance, the upper 12 inches of soil cover shall be ignored in areas that are not covered with hardscape. Retaining wall footings shall be designed to resist the lateral forces by passive soil resistance and/or base friction as recommended for foundation lateral resistance.

  Retaining walls shall be designed to resist earth pressures presented in Table 8.1.3 of Technical Appendix D. These values assume that the retaining walls will be backfilled non-expansive free draining materials (Sand Equivalent of 20 or better and an Expansion Index of 20 or less). Most of the materials onsite are considered free-draining and will be suitable for placement behind these walls. If non-free draining materials are utilized, revised values will need to be provided to design the retaining walls. Retaining walls shall be designed to resist additional loads such as construction loads, temporary loads, and other surcharges as evaluated by the structural engineer.

  In addition to the above static pressures, retaining walls supporting more than 6 feet of backfill height shall designed to resist seismic loading as required by the 2016 CBC. The seismic load can be modeled as a thrust load applied at a point 0.6H above the base of the wall, where H is

equal to the height of the wall. The seismic load (in pounds per lineal foot of wall) is represented by the following equation:

Pe = ⅜ *γ*H2 *kh

Where: Pe = Seismic thrust load H = Height of the wall (feet)
γ = soil density = 130 pounds per cubic foot (pcf) kh = seismic pseudostatic coefficient = 0.5 * PGAM

The site-specific peak horizontal ground acceleration (PGAM) is provided in Section 5.7.5 of Technical Appendix D. Walls shall be designed to resist the combined effects of static pressures and the above seismic thrust load.

The foundations for retaining walls of appurtenant structures structurally separated from the building structure may bear on properly compacted fill. Retaining wall footings shall be designed to resist the lateral forces by passive soil resistance and/or base friction as recommended for foundation lateral resistance. To relieve the potential for hydrostatic pressure wall backfill shall consist of a free draining backfill (sand equivalent "SE" >20) and a heel drain shall be constructed. The heel drain shall be placed at the heel of the wall and should consist of a 4-inch diameter perforated pipe (SDR35 or SCHD 40) surrounded by 4 cubic feet of crushed rock (3/4- inch) per lineal foot, wrapped in filter fabric (Mirafi® 140N or equivalent) as shown in Figure 5 of Technical Appendix D.

Proper drainage devices shall be installed along the top of the wall backfill, which shall be properly sloped to prevent surface water ponding adjacent to the wall. In addition to the wall drainage system, for building perimeter walls extending below the finished grade, the wall shall be waterproofed and/or damp-proofed to effectively seal the wall from moisture infiltration through the wall section to the interior wall face.

The wall shall be backfilled with granular soils placed in loose lifts no greater than 8- inches thick, at or near optimum moisture content, and mechanically compacted to a minimum 90 percent relative compaction as determined by ASTM Test Method D1557. Flooding or jetting of backfill materials generally do not result in the required degree and uniformity of compaction and, therefore, is not recommended. The soils engineer or his representative shall observe the retaining wall footings, backdrain installation and be present during placement of the wall backfill to confirm that the walls are properly backfilled and compacted.

- Final site grading shall assure positive drainage away from structures. Planter areas shall be provided with area drains to transmit irrigation and rain water away from structures. The use of gutters and down spouts to carry roof drainage well away from structures is recommended. Raised planters shall be provided with a positive means to remove water through the face of the containment wall.

- Block wall footings shall be founded a minimum of 24-inches below the lowest adjacent grade. To reduce the potential for uncontrolled, unsightly cracks, it is recommended that a

construction joint be incorporated at regular intervals. Spacing of the joints shall be between 10 and 20 feet.

- In an effort to minimize shrinkage cracking, concrete flatwork shall be constructed of uniformly cured, low-slump concrete and shall contain sufficient control/contraction joints (typically spaced at 8 to 10 feet, maximum). Additional provisions need to be incorporated into the design and construction of all improvements exterior to the proposed structures (pools, spas, walls, patios, walkways, planters, etc.) to account for the hillside nature of the project, as well as being designed to account for potential expansive soil conditions. Design considerations on any given lot may need to include provisions for differential bearing materials (bedrock vs. compacted fill), ascending/descending slope conditions, bedrock structure, perched (irrigation) water, special surcharge loading conditions, potential expansive soil pressure, and differential settlement/heave.

  All exterior improvements shall be designed and constructed by qualified professionals using appropriate design methodologies that account for the onsite soils and geologic conditions. The aforementioned considerations shall be used when designing, constructing, and evaluating long-term performance of the exterior improvements on the lots.

  The homeowners shall be advised of their maintenance responsibilities as well as geotechnical issues that could affect design and construction of future homeowner improvements. The information presented in Appendix F of Technical Appendix D shall be considered for inclusion in homeowner packages in order to inform the homeowner of issues relative to drainage, expansive soils, landscaping, irrigation, sulfate exposure, and slope maintenance.

- Preliminary pavement recommendations for streets and driveways are provided below. The performance of pavement is highly dependent on providing positive surface drainage away from the edge of pavement. Ponding of water on or adjacent to the pavement will likely result in pavement distress and subgrade failure. Drainage from landscaped areas shall be directed towards controlled drainage structures and not towards pavement areas. Landscaped areas adjacent to pavement areas are not recommended due the potential for surface or irrigation water infiltrating into the aggregate base and pavement subgrade. If landscaped areas are placed adjacent to pavement areas, consideration shall be given to implementing measures that will reduce the potential for water to be introduced into the aggregate base. Such measures may include installing impermeable vertical barriers between the landscaped area and pavement areas including deepened curbs or 10 mil thick plastic liners. Such barriers shall extend a minimum of 6 inches below the bottom of the aggregate base.

- Presented in Table 8.4.4.1 of Technical Appendix D are preliminary pavement sections for a range of traffic indices and an assumed Resistance-Value (R-Value) of 30 for the subgrade soils. R-Value testing of the subgrade soils shall be performed during precise grading operations to verify the actual R-Value. The project Civil Engineer or Traffic Engineer shall select traffic indices that are appropriate for the anticipated pavement usage and level of maintenance desired through the pavement life. Final pavement structural sections will be dependent on the R-value of the subgrade materials and the traffic index for the specific street or area being addressed. The pavement sections are subject to the review and approval of the County of Riverside.

Pavement subgrade soils shall be at or near optimum moisture content and shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D1557 and should conform with the specification listed in Section 26 of the Standard Specifications for the State of California Department of Transportation (Caltrans) or Section 200-2 of the Standard Specifications for Public Works Construction (Green Book). The asphalt concrete shall conform to Section 26 of the Caltrans Standard Specifications or Section 203-6 of the Green Book.

- Consideration shall be given to use Portland cement concrete (PCC) pavements in areas where dumpsters will be stored and where buses and garbage trucks will stop and load. Where feasible, these areas shall include a 6-inch thick PCC pavement section placed over 6 inches of aggregate base compacted to 95 percent relative compaction.

- Concrete with minimum 28-day Modulus of Rupture (M-R) of 550 psi and compressive strength of 3,000 psi shall be used, where feasible. Transverse contraction joints shall not be spaced more than 15 feet and shall be cut to a depth of ¼ the thickness of the slab. Longitudinal joints shall not be spaced more than 15 feet apart; however, are not necessary in the pavement adjacent to the curb and gutter section.

- Concrete in contact with soil or water that contains high concentrations of soluble sulfates can be subject to chemical deterioration. Laboratory testing by AGS indicated a sulfate content of 1,074 ppm (i.e. 0.107%) on-site. According to American Concrete Institute (ACI) 318-11, the potential for sulfate attack is Class S1 – Moderate for water-soluble sulfate content in soil between 0.10 percent and 0.20 percent by weight (i.e., 1,000 ppm to 2,000 ppm). Therefore, the site earth materials may be considered to have moderate potential for sulfate attack. According to ACI 318 guidelines, Type V cement for concrete structures in contact with soil shall be utilized and a water-cement ratio of no more than
  0.50 shall be maintained.

- A factor for evaluating corrosivity to buried metal is electrical resistivity. The electrical resistivity of a soil is a measure of resistance to electrical current. Corrosion of buried metal is directly proportional to the flow of electrical current from the metal into the soil. As resistivity of the soil decreases, the corrosivity generally increases. The sample tested resulted in electrical resistivity value of 980 ohm-centimeters.

  Correlations between resistivity and corrosion potential (NACE, 1984) indicate that the soils have corrosive potential to buried metals. As such, corrosion protection for metal in contact with site soils shall be considered. Corrosion protection may include the use of epoxy or asphalt coatings. A corrosion engineer shall be consulted regarding corrosion protection recommendations for the Project.

- Maintenance of improvements is essential to the long-term performance of structures and slopes. Although the design and construction during mass grading created slopes that are considered both grossly and surficially stable, certain factors are beyond the control of the soil engineer and geologist. The homeowners must implement certain maintenance procedures.

In addition to the appended Homeowners Maintenance Guidelines, the following recommendations shall be implemented.

Slope planting shall consist of ground cover, shrubs, and trees that possess deep, dense root structures and require a minimum of irrigation. The resident shall be advised of their responsibility to maintain such planting.

Roof, pad, and lot drainage shall be collected and directed away from structures and slopes and toward approved disposal areas. Design fine-grade elevations shall be maintained through the life of the structure, or if design fine grade elevations are altered, adequate area drains shall be installed in order to provide rapid discharge of water away from structures and slopes. Residents shall be made aware that they are responsible for maintenance and cleaning of all drainage terraces, down drains, and other devices that have been installed to promote structure and slope stability.

The resident, homeowner, and Homeowner Association shall be advised of their responsibility to maintain irrigation systems. Leaks shall be repaired immediately. Sprinklers shall be adjusted to provide maximum uniform coverage with a minimum of water usage and overlap. Overwatering with consequent wasteful run-off and ground saturation shall be avoided. If automatic sprinkler systems are installed, their use must be adjusted to account for natural rainfall conditions.

Residents or homeowners shall undertake a program for the elimination of burrowing animals. This shall be an ongoing program in order to maintain slope stability.

Monitoring:

A qualified Geotechnical Engineer and/or Geologist will be retained under contract and will conduct any ongoing observations, monitoring, and reporting during grading operations as identified within the recommendations given in the Project's May 25, 2018 "Updated Preliminary Geotechnical Investigation" by AGS and the September 7, 2023 Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area by Leighton, or additional recommendations based on field conditions observed during grading operations.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. Ground-shaking Zone a) Be subject to strong seismic ground shaking?	☐	☒	☐	☐

Source(s): Riverside County General Plan Figure S-4 "Earthquake-Induced Slope Instability Map," and Figures S-13 through S-21 (Riverside County, 2020a); Riverside County General Plan EIR No. 441, Figure 4.10.2 (Riverside County 2020b); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) The nearest fault zone, Elsinore Fault Zone, occurs approximately 5.5 miles southwest from the Project site. However, the Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. The risk is not considered substantially different than that of other similar properties in the southern California area. The Project would be required to construct all proposed structures in accordance with the CBC (Title 24) and the Riverside County Building Code. The CBC and Riverside County Building Code have been designed to preclude significant adverse effects associated with strong seismic ground shaking.

The proposed Project has the potential to expose people or structures to substantial adverse effects, including, loss, injury, or death, as a result of strong seismic ground shaking. This is evaluated as a significant impact, however with the implementation of **Mitigation Measure GEO-1**, the recommendations outlined within the Projects preliminary geotechnical evaluation, the impacts would be reduced to less than significant. (AGS, 2018, pp. 9-10)

Mitigation: See **Mitigation Measure GEO-1** outlined within Section 12, "Liquefaction Potential Zone".

Monitoring: See monitoring outlined within Section 12, "Liquefaction Potential Zone".

14. Landslide Risk a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?	☐	☒	☐	☐

Source(s): On-site Inspection, Riverside County General Plan Figure S-5 "Regions Underlain by Steep Slope"; (Riverside County, 2020a); Riverside County General Plan EIR No. 441, Figure 4.10.2 (Riverside County 2020b); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) On- or Off-Site Landslide

Under existing conditions, the Project site contains gently sloping topography, and does not contain any unique features or prominent hillsides that could become unstable and subject the Project site or surrounding areas to a landslide. Due to topography and hard and massive nature of the underlying granitic bedrock at the Project site, the potential of seismically-induced land sliding under existing conditions is considered to be "very low." As such, impacts due to landslides would be less than significant. (AGS, 2018, p. 12)

Lateral Spreading

Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore pressure build-up or liquefaction in a shallow underlying deposit during an earthquake. Due to the lack of shallow ground water, the potential for lateral spreading is identified by AGS as being "remote." However, the findings made by AGS with respect to lateral spreading assumes that the recommendations of the Project's geotechnical study are implemented. Impacts due to lateral spreading could occur if the recommendations of the Project's geotechnical study are not adhered to. Accordingly, impacts due to lateral spreading could be potentially significant, however with the implementation of **Mitigation Measure GEO-1**, the recommendations outlined within the Projects preliminary geotechnical evaluation, the impacts would be reduced to less than significant. (AGS, 2018, p. 12)

Collapse

Although the Project site conditions and the lack of near-surface groundwater would result in minimal impacts from potential hydro-collapse, there is nonetheless a remote potential for such hazards to impact future development on site in the event that the recommendations of the Project's geotechnical study are not incorporated into future construction plans for the site. Thus, impacts due to hydro-collapse could be potentially significant, however with the implementation of **Mitigation Measure GEO-1**, the recommendations outlined within the Projects preliminary geotechnical evaluation, the impacts would be reduced to less than significant

Rockfall Hazards

Based on the foregoing analysis, impacts due unstable geologic units or soils that could potentially result in rockfall hazards and hydro-collapse would be potentially significant prior to mitigation, while impacts due to landslides and subsidence would be less than significant.

Mitigation: See **Mitigation Measure GEO-1** outlined within Section 12, "Liquefaction Potential Zone".

Monitoring: See monitoring outlined within Section 12, "Liquefaction Potential Zone".

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. Ground Subsidence a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure S-7 "Documented Subsidence Areas Map"; (Riverside County, 2020a); Riverside County General Plan EIR No. 441, Figure 4.10.5 (Riverside County 2020b); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

The Project site is underlain with hard, granitic bedrock with limited thickness of sediments below the site. Accordingly, the potential for subsidence due to settlement is very unlikely. Impacts associated with ground subsidence would be less than significant. (AGS, 2018, p. 9)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

16. Other Geologic Hazards a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?	☐	☐	☒	☐

Source(s): Project Application Materials; Riverside County General Plan EIR No. 441 (Riverside County, 2020b); Google Earth Pro (Google Earth, 2023); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) A seiche is a free-standing wave oscillation on the surface of water in an enclosed or semi-enclosed basin. The wave can be initiated by an earthquake and can vary in height from several centimeters to a few meters. The Project site is located 0.5 mile north of Lake Mathews; however, and as noted by EIR No. 441, which addresses the County's 2021 update to the General Plan, only two water bodies in Riverside County have the potential to result in a seismically-induced seiche that could affect occupied property: Lake Elsinore and Lake Perris Reservoir (Riverside County, 2020b). Additionally, LMWAP Figure 10, Lake Mathews/Woodcrest Area Plan Flood Hazards, shows that the Project site is located just northeast of areas that would be subject to inundation in the event of a failure of the Lake Mathews Dam, and thus the Project site is not subject to hazards associated with dam inundation. The fact that the site is not subject to dam inundation hazards further demonstrates that the Project site is not subject to inundation from seiches. Accordingly, impacts due to a seiche would be less than significant. (AGS, 2018, pp. 9-10)

Based on the foregoing analysis, impacts due to geologic hazards, such as seiche, mudflow, and/or volcanic hazards would be less than significant.

Mitigation: See **Mitigation Measure GEO-1** outlined within Section 12, "Liquefaction Potential Zone".

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Monitoring: See monitoring outlined within Section 12, "Liquefaction Potential Zone".

17. Slopes				
a) Change topography or ground surface relief features?	☐	☐	☒	☐
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?	☐	☒	☐	☐
c) Result in grading that affects or negates subsurface sewage disposal systems?	☐	☐	☐	☒

Source(s): Google Earth Pro (Google Earth, 2023); Project Application Materials; Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) The Project site is contains gently sloping topography under existing conditions and does not contain any unique topographic features or steep natural or manufactured slopes. Implementation of the Project would result in mass grading activities over approximately 95.96 acres. Grading proposed by the Project would result in moderate changes to the site's topography and ground surface relieve features. All proposed cut and fill slopes would be constructed at a maximum gradient of 2:1, which AGS determined are likely to be stable with adherence to the recommendations documented in the Project's geotechnical study. Impacts associated with the proposed changes to the site's topography and ground surface relief features has been evaluated throughout this initial study under appropriate subject sections; in all cases, where significant impacts are identified due to the Project's proposed changes to topography and/or surface relief features (e.g., erosion, flooding, etc.), feasible mitigation measures have been imposed to ensure impacts are reduced to below a level of significance or to the maximum feasible extent. There are no components of the Project's proposed grading and development that would result in significant environmental effects not otherwise addressed in this subsection or throughout this initial study. Accordingly, impacts due to a change to topography and/or ground surface relief features would be less than significant.

b) All slopes proposed by the Project's are designed at a maximum gradient of 2:1. However, proposed cut slopes have been designed at a maximum height of 30 feet, while proposed fill slopes have been designed at a maximum height of 45 feet. The proposed heights of both cut and fill slopes could result in potential impacts due to slope stability. Absent adherence to the recommendations contained in the Project's geotechnical study, impacts due to proposed cut and fill slopes, and their attendant potential for failure, represents a potentially significant impact however with the implementation of **Mitigation Measure GEO-1**, the recommendations outlined within the Projects preliminary geotechnical evaluation, the impacts would be reduced to less than significant.

c) Under existing conditions, there are no subsurface sewage disposal systems on the property. As such, the Project would not affect or negate any subsurface sewage disposal system during grading operations. No impact would occur.

The Project would install a domestic sanitary sewer system that would connect to Western Municipal Water District (WMWD) facilities for the purpose of conveying and treating wastewater generated by the

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Project. The Project does not propose the use of septic tanks or alternative waste water disposal systems. Accordingly, no impact would occur.

Mitigation: See **Mitigation Measure GEO-1** outlined within Section 12, "Liquefaction Potential Zone".

Monitoring: See monitoring outlined within Section 12, "Liquefaction Potential Zone".

18. Soils				
a) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
b) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Source(s): U.S.D.A. Soil Conservation Service Soil Surveys (NRCS, 2024); Project Application Materials; Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) Approximately 81.95 acres of the Project site (9.2%) are rated as having a "slight" susceptibility to erosion, indicating that erosion is unlikely under ordinary climatic conditions; 14.01 acres (90.8%) are rated as having a "moderate" susceptibility to erosion (NRCS, 2018), indicating that some erosion is likely and that erosion-control measures may be needed. The Project would result in the removal of vegetative cover during construction activities and could result in an increase in flows that could affect erosion rates downstream. Thus, implementation of the Project has the potential to result in soil erosion. The analysis below summarizes the likelihood of the Project to result in substantial soil erosion during temporary construction activities and long-term operation.

Construction-Related Impacts

Under existing conditions, the Project site is not developed with buildings or other improvements. Exposed soils on-site are subject to erosion during rainfall events or high winds. This potential would increase during Project construction due to the removal of stabilizing vegetation and increased exposure of these erodible materials to wind and water.

Pursuant to the requirements of the State Water Resources Control Board, the Project applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. This NPDES Permit requires the Project applicant to prepare and submit to the County for approval a Project-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from stormwater and non-stormwater discharges.,

Adherence to the requirements noted in the Project's required site-specific SWPPP, would ensure that potential construction-related impacts associated with water and wind erosion would be reduced to below a level of significance.

Long-Term Operational Impacts

Following construction, wind and water erosion on the Project site would be minimized, as the disturbed areas would be landscaped or covered with impervious surfaces, and drainage would be controlled through a storm drain system. As discussed in detail in EIR Subsection 4.9, Hydrology and Water Quality, the Project would not substantially increase the rate or amount of runoff leaving the site, as compared to existing conditions. As part of the Project, the County is requiring the construction of stormwater facilities (such as detention basins) to reduce on-site runoff flows to pre-development conditions. As discussed in Subsection 4.9, construction of detention basins and water quality basins on-site would ensure that post-development rates and amounts of runoff are similar to those occurring under existing conditions. Accordingly, implementation of the Project would not increase the risk of siltation or erosion in stormwater discharged from the Project site. In addition, the WQMP for the Project requires post-construction measures to ensure on-going protection against erosion. Compliance with the WQMP would be required as a condition of Project approval, and long-term maintenance of on-site water quality features also would be required. Therefore, implementation of the Project would not significantly increase the risk of long-term wind or water erosion on- or off-site, and impacts would be less than significant.

b) Based on testing of soil samples taken from the Project site by AGS, it was determined that the site's soils vary in expansion potential from very low to medium. However, it is anticipated that the majority of materials will fall into the very low to low range. Nonetheless, there is a potential for the Project to result in substantial risk to life or property if the Project were to fail to implement the site-specific recommendations of the Project's geotechnical study to attenuate areas that may be subject to soils with low or moderate expansive potential. This is evaluated as a potentially significant impact, however with the implementation of **Mitigation Measure GEO-1**, the recommendations outlined within the Projects preliminary geotechnical evaluation, the impacts would be reduced to less than significant. (AGS, 2018, p. 14)

c) The Project would install a domestic sanitary sewer system that would connect to Western Municipal Water District (WMWD) facilities for the purpose of conveying and treating wastewater generated by the Project. The Project does not propose the use of septic tanks or alternative waste water disposal systems. Accordingly, no impact would occur.

Mitigation: See **Mitigation Measure GEO-1** outlined within Section 12, "Liquefaction Potential Zone".

Monitoring: See monitoring outlined within Section 12, "Liquefaction Potential Zone".

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
19. Wind Erosion and Blowsand from project either on or off site. a) Be impacted by or result in an increase in wind erosion and blowsand, either on or off site?	☐	☐	☒	☐

Source(s): Riverside County 2019 General Plan Safety Element Figure S-8 "Wind Erosion Susceptibility Areas" (Riverside County 2020a); Ord. No. 460 (Riverside County 2023), Article XV & Ord. No. 484 (Riverside County 2023); Updated Preliminary Geotechnical Report (AGS, 2018); Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area (Leighton, 2023)

Findings of Fact:

a) Approximately 81.95 acres of the Project site (9.2%) are rated as having a "slight" susceptibility to erosion, indicating that erosion is unlikely under ordinary climatic conditions; 14.01 acres (90.8%) are rated as having a "moderate" susceptibility to erosion (NRCS, 2018), indicating that some erosion is likely and that erosion-control measures may be needed. The Project would result in the removal of vegetative cover during construction activities and could result in an increase in flows that could affect wind erosion and blow sand erosion. Thus, implementation of the Project has the potential to result in soil erosion. The analysis below summarizes the likelihood of the Project to result in substantial soil erosion during temporary construction activities and long-term operation.

Construction-Related Impacts

Under existing conditions, the Project site is not developed with buildings or other improvements. Exposed soils on-site are subject to erosion during high winds. This potential would increase during Project construction due to the removal of stabilizing vegetation and increased exposure of these erodible materials to wind and water.

Pursuant to the requirements of the State Water Resources Control Board, the Project applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. This NPDES Permit requires the Project applicant to prepare and submit to the County for approval a Project-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must identify and implement an effective combination of wind erosion control (i.e., Best Management Practices). Adherence to the requirements noted in the Project's required site-specific SWPPP, would ensure that potential construction-related impacts associated with wind erosion would be reduced to below a level of significance.

Long-Term Operational Impacts

Following construction, wind erosion on the Project site would be minimized, as the disturbed areas would be landscaped or covered with impervious surfaces. Accordingly, implementation of the Project would not increase the risk of erosion from wind experienced by the Project site. Therefore, implementation of the Project would not significantly increase the risk of long-term water erosion on- or off-site, and impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS Would the project:				
20. Greenhouse Gas Emissions a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Source(s): Riverside County General Plan (Riverside County, 2020a), Riverside County Climate Action Plan (Riverside County 2019); Project Application Materials; Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis (Vista Environmental, 2023)

Findings of Fact:

a) The proposed project would consist of a single-family residential development. The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste disposal, water usage, and construction equipment. A summary of the results is shown below in Table 20.1 (Vista Environmental, p. 69):

Table 20.1 - Project Related Greenhouse Gas Annual Emissions

	Greenhouse Gas Emissions (Metric Tons per Year)			
Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Mobile Sources[1]	2,351	0.09	0.11	2,389
Area Sources[2]	9.74	<0.01	<0.01	9.79
Energy Usage[3]	240	0.02	<0.01	241
Water and Wastewater[4]	24.3	0.22	0.01	31.4
Solid Waste[5]	13.5	1.35	<0.01	47.3
Refrigeration[6]	--	--	--	0.97
Construction[7]	74.2	<0.01	<0.01	74.8
Total GHG Emissions	2,713	1.69	0.13	**2,794**
County of Riverside CAP Threshold of Significance				**3,000**

Notes:
[1] Mobile sources consist of GHG emissions from vehicles.
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, hearths, and landscaping equipment.
[3] Energy usage consists of GHG emissions from electricity and natural gas usage (non-hearths).
[4] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[5] Waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Refrigeration includes GHG emissions from refrigerants used in air conditioning units.
[7] Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.
Source: CalEEMod Version 2022.1.

The data provided in Table 20.1 shows that the proposed project would create 2,864 MTCO2e per year. According to the County of Riverside CAP threshold of significance, if a project creates less than 3,000 MTCO2e per year, the GHG emissions from the proposed project is determined to be less than significant. It should also be noted, that the proposed structures will be required to meet the most current Title 24 Part 6 building standards that require all new homes to be designed to use net zero energy, through a combination of energy efficiency measures as well as requiring all new homes to install rooftop photovoltaic systems that are of adequate size to generate enough electricity to meet the net-zero energy

requirements. The County also requires that the all new developments to institute the water conservation measures that are detailed in the California Green Building Code. For these reasons, a less than significant generation of greenhouse gas emissions would occur from construction and operation of the proposed project. (Vista Environmental, p. 70)

b) The County of Riverside adopted the County of Riverside Climate Action Plan (CAP) on December 2015 and updated November 2019. The 2015 CAP utilized a GHG emissions reduction target of a 15 percent decrease from 2008 levels by the year 2020, in order to meet the requirements of AB 32 and SB 375. The CAP was updated in 2019 in order to address a 2017 Settlement Agreement with the Sierra Club and other groups as well as to bring the CAP in conformance with SB 32 and AB 197 that set a statewide 2030 goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. The 2017 Settlement Agreement updated the CAP to also be in alignment with the goal and policies for new development provided in California's 2017 Climate Change Scoping Plan, prepared by CARB, November 2017. Specifically, the 2017 Settlement Agreement now requires all new residential developments to install EV charging stations in the garages of new residential units, requires rooftop solar PV systems to be installed on all new homes and new commercial buildings that total more than 100,000 square feet of building space, and use of high-efficiency bulbs in new traffic signals. (Vista Environmental, p. 70)

The CAP has developed a process for determining significance of GHG impacts from new development projects that includes (1) applying an emissions level that is determined to be less than significant for small projects, and (2) utilizing Screening Tables to mitigate project GHG emissions that exceed the threshold level. The CAP has provided a threshold of 3,000 MTCO2e per year, which was based on capturing 90 percent of emission from all projects in the County, to be used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions. The proposed project would generate 2,864 MTCO2e per year, which is within the 3,000 MTCO2e per year threshold. It should also be noted, that the proposed homes will be required to meet the most current Title 24 Part 6 building standards that require all new homes to be designed to use net zero energy, through a combination of energy efficiency measures as well as requiring all new homes to install rooftop photovoltaic systems that are of adequate size to generate enough electricity to meet the net-zero energy requirements. In additional to Title 24 building standards the rooftop photovoltaic systems for residential projects with over 75 units are required to offset 30 percent of the energy demand for the Project. For these reasons, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. (Vista Environmental, p. 71)

Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and would be a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

HAZARDS AND HAZARDOUS MATERIALS Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
21. Hazards and Hazardous Materials				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☐	☐	☒
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?	☐	☐	☐	☒
e) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

Source(s): Project Application Materials; Google Earth Pro (Google Earth, 2023); Department of Toxic Substances Control (DTSC) - Envirostor Database (DTSC, 2023); Phase I/II Environmental Site Assessment Update Report (GeoScience, 2023)

Findings of Fact:

a) Implementation of the proposed Project has the potential to expose future site workers and/or residents to hazardous materials or conditions associated with the existing site conditions, construction activities, and long- term operation of the proposed Project. Each is discussed below.

Existing Site Conditions

The Project site between 1938 and 1953 was undeveloped land. The Project site was fully developed with orchards from the late-1960s to the mid-1990s. Orchards in the northwestern and central portion of the Project site appear to have been cleared in 2005. The Project site remained undeveloped with unchanged conditions from 2006 to 2012, and unchanged from conditions observed during site reconnaissance conducted by Geoscience in 2023. It should be noted that no substantive changes to the Project site have occurred since 2015. (Geoscience, 2023, p. 7)

Prior to the mid-1960s, the area surrounding the Project site was undeveloped. Areas surrounding the Project site became increasingly developed in the late 1930s to the early 1940s with orchards and other uses surrounding Lake Matthews. The area immediately surrounding the Project site was fully developed as orchards from the mid-1960s through the early 2000s. From the mid-2000s to present day, the surrounding properties were developed for residential purposes. (Geoscience, 2023, p. 7)

Based on a review of state and local information sources for the Project site and surrounding areas, the Project site and areas within 0.5-mile of the site were not identified on any of the following information sources: Department of Toxic Substances Control; EnviroStor; California Regional Water Quality Board

(RWQCB) GeoTracker; National Pipeline Mapping System GeoTracker; and the State of California Department of Oil, Gas, and Geothermal Resources. Additionally, several planning permits were reviewed on the Riverside County Transportation and Land Management Agency (TLMA) website, and no building, plumbing, grading, or electrical permits were available for the Project site. (Geoscience, 2015, pp. 7-8)

Based on current field observation the Project site consists of undeveloped land with native grasses and dirt roads, with a single residential home in the central portion of the Project site. The single residential home has since been demolished, authorized under Demolition Permit #BDE150131, and thus no longer occurs on-site. Geoscience also noted that the Project site was formerly developed as an orchard; however, the majority of the site has been devoid of trees and fallow for many years. Several areas of unauthorized dumping of household trash also were observed. (Geoscience, 2023, p. 10)

Based on the Phase I ESA conducted by Geoscience and based on a review of regulatory databases, historical conditions of the Project site, and a site reconnaissance, the Project site does not contain any recognized environmental conditions (RECs), nor is the Project site affected by any off-site RECs. No odors, pools of liquids, drums, significantly stained soil, unidentified subsurface containers, distressed vegetation, pits, or unmaintained ponds were observed. One area of dumping five-gallon buckets formerly containing paint and possibly motor oil were observed in the northwestern portion of the Project site along the area that crosses a ravine. Additionally, two wells were observed on the Project site in the western portion of the Project site, and will be capped a minimum of 10 feet below the finished surface during grading operations. Two suspected water tanks were located on the eastern side of the Project site; however, no visible staining or stressed vegetation was observed. Two pole-mounted transformers were noted on the Project site, one located in the western portion of the Project site, and one located in the eastern-central portion of the Project site. No leaking or staining was observed in the area surrounding the transformers. Based on these findings, Geoscience concluded there are no conditions associated with the Project site's existing condition or surroundings that would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Accordingly, no impact would occur associated with the Project site's existing conditions. (GeoScience, 2023, pp. 18-19)

Construction Related Activities

Heavy equipment that would be used during construction of the proposed Project would be fueled and maintained by substances such as oil, diesel fuel, gasoline, hydraulic fluid, and other liquid materials that would be considered hazardous if improperly stored or handled. In addition, materials such as paints, roofing materials, solvents, and other substances typically used in building construction would be located on the Project site during construction. Improper use, storage, or transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with future development that would be a reasonably consequence of the proposed Project than would occur on any other similar construction site. Thus, impacts due to construction activities would not cause a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. A less-than-significant impact would occur.

Long Term Operation

The proposed Project consists of a proposal of a 163-unit residential development. Residential uses are not typically associated with the transport, use, or disposal of hazardous materials. Household goods used

by residential homes that contain toxic substances are usually low in concentration and small in amount; therefore, there is no significant risk to humans or the environment from the use of such materials. Future residents would be required to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility. Also, as of February 2006, fluorescent lamps, batteries, and mercury thermostats can no longer be disposed in the trash. Furthermore, the transport, use, and disposal of hazardous materials are fully regulated by the USEPA, State of California, and/or Riverside County. With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project would be less than significant.

b) As indicated under the discussion and analysis Threshold a), near-term construction activities would not have a significant impact associated with hazardous materials handling or disposal. The potential for an accidental release of hazardous materials into the environment is no greater than the potential on any other construction site. Thus, the hazard due to the foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant.

Long-term operation of the proposed Project also would not result in any significant adverse effects associated with hazardous materials handling or disposal. Residential uses are not associated with the transport, use, or disposal of hazardous materials. Household goods used by residential homes that contain toxic substances are usually low in concentration and small in amount; therefore, there is no significant risk to humans or the environment from the use of such materials. Accordingly, the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and impacts would be less than significant.

c) The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and at Project build-out, the proposed Project would be required to maintain adequate access for emergency vehicles. Accordingly, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan, and no impact would occur.

d) The nearest existing school to the Project site is Lake Mathews Elementary School, located approximately 0.5-mile west of the Project site (Google Earth, 2023). Accordingly, the Project does not have the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Accordingly, no impact would occur.

e) According to the Phase I Site Assessment prepared for the Project the Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5 (GeoScience, 2023, pp. 15-19). Accordingly, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
22. Airports				
a) Result in an inconsistency with an Airport Master Plan?	☐	☐	☐	☒
b) Require review by the Airport Land Use Commission?	☐	☐	☐	☒
c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
d) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure S-20 "Airport Locations" (Riverside County 2020a); Riverside County Information Technology – Map My County (RCIT, 2023); Google Earth Pro (Google Earth, 2023)

Findings of Fact:

a) The Project site is not located within any known Airport Influence SWAP Area or Airport Safety Zone (RCIT, 2023). Accordingly, implementation of the project does not have the potential to result in an inconsistency with an Airport Master Plan and no impacts would occur.

b) The Project site is not located within any known Airport Influence SWAP Area or Airport Safety Zone (RCIT, 2023). Accordingly, implementation of the Project will not require review by the Airport Land Use Commission, thus no impacts would occur.

c) The Project site is located approximately 5.2 miles southeast of the nearest runway at the Riverside Municipal Airport. The Project site is not located within any known Airport Influence SWAP Area or Airport Safety Zone (RCIT, 2023; Google Earth, 2023). The Project would not result in safety hazards for people residing or working in the area as the result of being in the vicinity of a public or private airport. Accordingly, no impacts would occur.

d) The Project site is located within the vicinity a small private airstrip, however, based on aerial photographs from Google Earth, this airstrip has not been operational since at least 2011 because a large yellow "X" is painted at the beginning of the runway (a universal aviation symbol for a runway closed to all operations) and the runway has been covered in dirt. The Project site is not within the vicinity of any other private airstrips or heliports (RCIT, 2023; Google Earth, 2023). Accordingly, implementation of the project would not result in safety hazards for people residing or working in the area as the result of being in the vicinity of a public or private airport. Accordingly, no impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY Would the project:				
23. Water Quality Impacts a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?	☐	☐	☒	☐
d) Result in substantial erosion or siltation on-site or off-site?	☐	☐	☒	☐
e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	☐	☐	☒	☐
f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
g) Impede or redirect flood flows?	☐	☐	☒	☐
h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	☐	☐	☒	☐
i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure S-9 "Special Flood Hazard Areas" (Riverside County 2020a); Figure S-10 "Dam Failure Inundation Zone" (Riverside County 2020a); CA Regional Water Quality Control Board (RWQCB) - Order No. R8-2010-0033 (RWQCB, 2010); Riverside County Ord. 754.1 (Stormwater Management/Discharge Controls) (Riverside County, 2023); Riverside County Information Technology – Map My County (RCIT, 2023); SARWQCB Santa Ana Region Basin Plan (RWQCB, 2019); FEMA Flood Insurance Rate Map (FIRM) Map No. 06065C1385G (FEMA, 2008); Western Municipal Water District Urban Water Management Plan (WMWD, 2015); CA Department of Water Resources – Basin Maps (CDWR, 2023); Preliminary Hydrology Study Tract Map 38605 (Adkan, 2023a), Project Specific Preliminary Water Quality Management Plan Tract 38605 (WQMP) (Adkan, 2023b)

Findings of Fact:

a) Construction Related Water Quality Impacts

Grading and construction of the proposed Project would involve substantial ground disturbance resulting in the generation of pollutants such as silt, debris, chemicals, paints, and other solvents potentially affecting water quality. As such, short-term water quality impacts would likely occur in the absence of any protective or avoidance measures. Pursuant to requirements of the SWRCB, the Project Applicant is required to obtain an NPDES permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP for construction related activities. The SWPPP would specify BMPs to minimize pollutants in storm water runoff, as well as non-storm water discharges. Typical measures employed during construction include the use of water trucks to minimize erosion; use of straw bale barriers; stabilizing construction entrances; hydroseeding, etc. The implementation of this plan would serve to prevent and/or minimize discharge of additional sources of polluted runoff and hence, protect water quality. Therefore, water quality impacts associated with construction activities are evaluated as less than significant and no mitigation measures would be required beyond compliance with the mandatory regulatory requirements (i.e., implementation of BMPs from a Project- specific SWPPP) described herein.

Post Development Related Water Quality Impacts

Implementation of the proposed Project would permanently alter the amount of impervious surfaces as a result of newly constructed roadways, structures, and other paved surfaces such as driveways, walkways, parking lots, and other residential-related hardscape. As a result, there would be an increase in storm water runoff requiring treatment when compared with existing conditions. This runoff would contain such urban pollutants as tire-wear residues; petroleum products such as oil and grease; landscaping fertilizer and pesticides; as well as litter and other types of wastes. Other potential sources of urban pollutants include bacterial indicators, nutrients, pesticides, sediments, trash/debris, oil, and grease (Adkan, 2023b, p. 14). The pollutants are washed off from the street surfaces by a rainfall adequate to produce sufficient runoff. The EPA has identified street surfaces as the primary source of pollution in urban areas, and such runoff is considered to be a “non-point” source. Unlike “point” source wastes, non-point sources cannot be quantified through flow measurement, sampling, and analysis techniques. This runoff, typical of urban use, would contribute to the incremental degradation of the water quality downstream if not properly treated.

Compliance with the County’s NPDES permit requirements, as stipulated in the CWA, would reduce impacts to water quality associated with Project-related activities. The NPDES permit requires the preparation of a post-construction management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic controls. A WQMP was prepared for the proposed Project and identifies non-structural and structural source controls as well as Project design features and BMPs. Structural controls include signage and stenciling; landscape and irrigation system design to include preservation of native trees within conservation areas; and landscape design to provide for minimal irrigation, fertilizers, and pesticides. Non-structural source controls include: the provision of educational materials to residents; providing education to maintenance staff regarding prohibitions; and sweeping sidewalks and streets regularly to prevent litter from accumulating. The Project’s WQMP also outlines the long-term funding mechanisms and contractual obligations for the operation and

maintenance of the Project's water quality features. The on-site detention/water quality basins within the public right-of-way would be maintained by the Riverside County Flood Control and Water Conservation District (RCFCWCD), while private storm drainage facilities would be maintained by a Community Facility District (CFD) (Adkan, 2023b, pp. 20)

The Project's WQMP has been prepared in accordance with the Santa Ana Region Hydromodification Management Plan and Riverside County requirements. The proposed storm drain design was developed to maintain existing drainage patterns to the maximum extent practicable. The system collects flows generated on-site and flows generated off-site that are tributary to the Project site and conveys the flows via an underground storm water drain system to three extended detention basins planned throughout the site. The extended detention basins are proposed to capture and treat the flows from tributary areas. These primary design features minimize urban runoff, limit the impervious footprint, maximize water conservation areas, and minimize the connection of impervious areas. Adherence to statutory requirements would ensure that water quality and waste discharge requirements are not violated.

Existing Drainage Condition

The Project site is bisected by a ridgeline running from east to west close to the center of the property assemblage. The ridgeline can also be defined by an unpaved road seen within aerial imagery providing a means of maintenance access for an existing reservoir owned by Western Municipal Water District (WMWD). From the ridge line the existing flows travel north and south into two natural drainage courses that bound the north and south edges of the project site. The drainage courses have been deeply incised and defined throughout time, and in many locations exhibit exposed bedrock limiting the potential for future erosion. Each of these two natural drainage courses convey flows northwesterly to a point of confluence westerly of the project site before being conveyed through a development to the north of the project site, known as Tramonte, and finally into the Harrison Dam facility. (Adkan 2023a, pp. 6)

The Harrison Dam was constructed based on the development of the upstream tributaries to protect the downstream properties located in the City of Riverside. The Dam was designed to detain the watershed of the proposed project, including the upstream properties, to a maximum discharge of 150 CFS. Based on the projects clustering efforts it was determined through discussion with RCFC that additional post development increased storm water runoff mitigation would be necessary beyond the normally required 2-, 5-, and 10-year storm events, and therefore detention basins are required for the project to be designed with the capacity to mitigate the 100-year storm events. (Adkan 2023a, pp. 6)

From the Harrison Dam facility existing storm flows are conveyed through the City of Riverside and ultimately into the Arizona Channel owned and maintained by RCFC. The Arizona Channel is part of a drainage system funded by Area Drainage Plan fees known at the Southwest Area Drainage Plan. (Adkan 2023a, pp. 6)

Proposed Drainage Condition

The project site has been design in such a manner to respect the existing ridgeline that bisects the project from east to west. This was also done to protect the existing unpaved road seen within aerial imagery providing a means of maintenance access for an existing reservoir owned by WMWD. The storm flows for the project development north of the ridgeline are conveyed into two extended detention basins (Basin 2 and 3, see Figure 23.1 below) each treating approximately half of project area north of the

ridgeline which is then released into the northern drainage course. The storm flows from the project development south of the ridgeline are conveyed into a single extended detention basin (Basin 1, see Figure 23.1 below) which is released into the southern drainage course. Preliminary storm drainage facilities and catch basins have been proposed within the proposed project to limit the spread of the 100 year on-site flows to be contained within tops of the street curbs. (Adkan 2023a, pp. 7)

As discussed within the Existing Drainage Condition section, it was determined through discussion with RCFC that additional post development increased storm water runoff mitigation would be necessary beyond the 2-, 5-, and 10-year storm events, and therefore the extended detention basins are required for the project to be designed with the capacity to mitigate the 100-year storm events. These calculations were performed utilizing the Synthetic Unit Hydrograph Method and a summary of the results are included within the tables below for Basin 1, 2 and 3 comparing the existing flow rates with the proposed flow rates when mitigated through attenuation of storm runoff within proposed extended detention basins. (Adkan 2023a, pp. 7)

There are two culvert crossings being proposed as part of the project. These culvert crossings are located in the northerly existing drainage course and the southerly existing drainage course and allow the development to provide access and utilities over the existing drainage courses. The culverts have been designed in accordance with the California Department of Fish and Wildlife (CDFW) to have a minimum size of 72" for the purposes of providing a downstream and upstream connection for habitat and wildlife within the drainage corridor. This results in culverts larger than necessary to convey the actual flow experience by a 100-year storm event. The culverts also contain the necessary headwalls, cutoff walls, and rip-rap energy dissipaters to reduce the storm flow velocities to a non-erosive level protecting the downstream drainage courses. (Adkan 2023a, pp. 7)

These primary design features minimize urban runoff, limit the impervious footprint, maximize water conservation areas, and minimize the connection of impervious areas. Adherence to statutory requirements would ensure that water quality and waste discharge requirements are not violated. As such, with respect to the potential to violate water quality standards and waste discharge requirements and further degrade existing surface or ground water quality, or otherwise substantially degrade water quality, the Project would result in less-than-significant impacts.

Table 23-1
Tract 38605– Extended Detention Basin No. 1 Outflow Comparison

Storm Event	Pre-Developed		Post-Developed		Post-Developed with Basin			Pre vs. Post Percent Difference (10% Max)
	Flow (cfs)	Volume (ac.ft.)	Flow (cfs)	Volume (ac.ft.)	Routed Basin Out Flow (cfs)	Storage Volume (ac.ft.)	Depth (ft)	
2 Year - 1 Hour	24.414	0.5905	27.801	0.8252	0.256	0.813	1.09	-99.0%
2 Year - 3 Hour	12.271	0.5324	15.090	1.0911	0.390	1.056	1.38	-96.8%
2 Year - 6 Hour	10.748	0.5686	13.584	1.4087	0.542	1.333	1.72	-95.0%
2 Year - 24 Hour	0.883	0.4084	3.455	2.0108	0.665	1.556	1.99	-24.7%
5 Year - 1 Hour	36.052	0.9826	39.589	1.2294	0.474	1.208	1.57	-98.7%
5 Year - 3 Hour	18.915	0.9607	21.675	1.6091	0.664	1.553	1.99	-96.5%
5 Year - 6 Hour	17.784	1.1262	20.558	2.1615	1.113	2.030	2.52	-93.7%
5 Year - 24 Hour	3.631	0.8560	6.203	3.0093	1.345	2.274	2.80	-63.0%
10 Year - 1 Hour	48.345	1.5864	50.425	1.7037	0.770	1.669	2.12	-98.4%
10 Year - 3 Hour	27.430	2.1065	28.574	2.4556	1.410	2.343	2.87	-94.9%
10 Year - 6 Hour	26.594	2.6586	27.752	3.3486	23.440	2.639	3.19	-11.9%
10 Year - 24 Hour	8.712	3.1005	9.934	4.8202	9.515	2.523	3.07	9.2%
100 Year - 1 Hour	77.592	2.6354	80.047	2.7527	12.283	2.546	3.09	-84.2%
100 Year - 3 Hour	44.128	3.6740	45.122	4.0260	39.828	2.776	3.34	-9.7%
100 Year - 6 Hour	44.275	5.1335	45.277	5.8312	40.883	2.785	3.35	-7.7%
100 Year - 24 Hour	15.619	6.3679	16.840	8.5048	16.714	2.583	3.13	7.0%

Table 23-2
Tract 38605– Extended Detention Basin No. 2 Outflow Comparison

Storm Event	Pre-Developed		Post-Developed		Post-Developed with Basin			Pre vs. Post Percent Difference (10% Max)
	Flow (cfs)	Volume (ac.ft.)	Flow (cfs)	Volume (ac.ft.)	Routed Basin Out Flow (cfs)	Storage Volume (ac.ft.)	Depth (ft)	
2 Year - 1 Hour	49.310	1.1435	47.194	1.3402	0.815	1.305	2.73	-98.3%
2 Year - 3 Hour	22.628	1.0312	20.084	1.7706	1.146	3.360	1.67	-94.9%
2 Year - 6 Hour	18.407	1.1012	17.339	2.3931	1.470	2.161	4.17	-92.0%
2 Year - 24 Hour	1.661	0.7911	6.393	3.8846	1.728	2.705	4.99	4.0%
5 Year - 1 Hour	72.605	1.9029	68.734	1.9445	1.302	1.887	3.73	-98.2%
5 Year - 3 Hour	35.099	1.8606	32.327	2.5395	1.579	2.390	4.51	-95.5%
5 Year - 6 Hour	31.060	2.1813	29.939	3.4998	11.484	3.003	5.41	-63.0%
5 Year - 24 Hour	6.892	1.6579	9.054	5.5022	6.944	2.949	5.33	0.8%
10 Year - 1 Hour	96.988	3.0723	91.590	2.7128	1.694	2.634	4.88	-98.3%
10 Year - 3 Hour	51.290	4.0800	47.348	3.4814	14.837	3.043	5.46	-71.1%
10 Year - 6 Hour	47.388	5.1495	45.795	4.8167	43.521	3.117	5.56	-8.2%
10 Year - 24 Hour	16.731	6.0058	12.911	6.7994	12.489	3.015	5.43	-25.4%
100 Year - 1 Hour	155.539	5.1040	149.688	4.7239	125.746	3.264	5.76	-19.2%
100 Year - 3 Hour	82.628	7.1162	79.045	6.1264	79.141	3.181	5.65	-4.2%
100 Year - 6 Hour	79.183	9.9433	79.376	8.6580	76.226	3.175	5.64	-3.7%
100 Year - 24 Hour	30.032	12.3348	26.289	12.2882	26.244	3.085	5.52	-12.6%

Table 23-3
Tract 38605– Extended Detention Basin No. 3 Outflow Comparison

Storm Event	Pre-Developed		Post-Developed		Post-Developed with Basin			Pre vs. Post Percent Difference (10% Max)
	Flow (cfs)	Volume (ac.ft.)	Flow (cfs)	Volume (ac.ft.)	Routed Basin Out Flow (cfs)	Storage Volume (ac.ft.)	Depth (ft)	
2 Year - 1 Hour	7.278	0.1721	6.894	0.2016	0.059	0.199	0.65	-99.2%
2 Year - 3 Hour	3.502	0.1551	3.105	0.2663	0.076	0.258	0.85	-97.8%
2 Year - 6 Hour	3.066	0.1657	2.682	0.3599	0.119	0.340	1.10	-96.1%
2 Year - 24 Hour	0.256	0.1190	0.961	0.5842	0.207	0.453	1.39	-19.1%
5 Year - 1 Hour	10.731	0.2863	10.025	0.2926	0.085	0.288	0.95	-99.2%
5 Year - 3 Hour	5.413	0.2799	5.001	0.3820	0.141	0.369	1.17	-97.4%
5 Year - 6 Hour	5.089	0.3281	4.638	0.5264	0.240	0.494	1.50	-95.3%
5 Year - 24 Hour	1.057	0.2494	1.362	0.8275	0.341	0.623	1.84	-67.7%
10 Year - 1 Hour	14.359	0.2623	13.398	0.4082	0.166	0.401	1.26	-98.8%
10 Year - 3 Hour	7.874	0.6137	7.299	0.5237	0.248	0.504	1.53	-96.9%
10 Year - 6 Hour	7.636	0.7746	7.055	0.7245	0.384	0.678	1.99	-95.0%
10 Year - 24 Hour	2.538	0.9033	1.943	1.0226	1.176	0.692	2.02	-53.7%
100 Year - 1 Hour	23.036	0.7679	21.922	0.7108	0.917	0.690	2.02	-96.0%
100 Year - 3 Hour	12.675	1.0704	12.163	0.9216	6.777	0.761	2.19	-46.5%
100 Year - 6 Hour	12.721	1.4956	12.206	1.3023	10.360	0.806	2.29	-18.6%
100 Year - 24 Hour	4.550	1.8552	3.955	1.8482	3.864	0.726	2.10	-15.1%

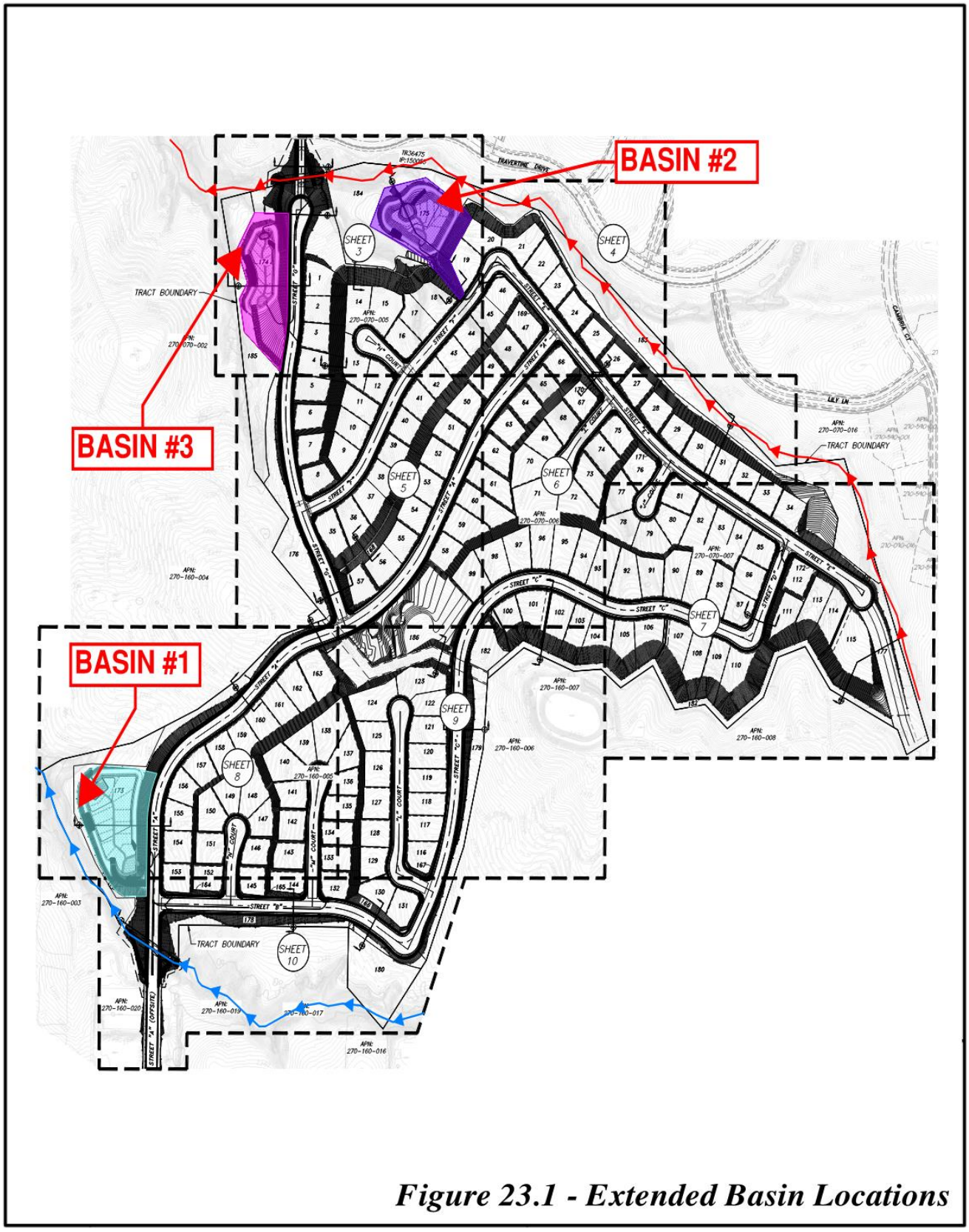


Figure 23.1 - Extended Basin Locations

b) The Project site is not located within a Groundwater Management Zone. However, runoff from the Project site ultimately would be conveyed to the north towards the Arlington GMZ. Because the total amount of runoff from the site following development would be similar to existing conditions, the Project would have no potential to interfere substantially with groundwater recharge and impacts would be less than significant.

c) The existing Project site is bisected by a ridgeline running from east to west close to the center of the property assemblage. The ridgeline can also be defined by an unpaved road seen within aerial imagery providing a means of maintenance access for an existing reservoir owned by Western Municipal Water District (WMWD). From the ridge line the existing flows travel north and south into two natural drainage courses that bound the north and south edges of the project site. The drainage courses have been deeply incised and defined throughout time, and in many locations exhibit exposed bedrock limiting the potential for future erosion. Each of these two natural drainage courses convey flows northwesterly to a point of confluence westerly of the project site before being conveyed through a development to the north of the project site, known as Tramonte, and finally into the Harrison Dam facility. (Adkan 2023a, pp. 6)

The proposed project site has been design in such a manner to respect the existing ridgeline that bisects the project from east to west. This was also done to protect the existing unpaved road seen within aerial imagery providing a means of maintenance access for an existing reservoir owned by WMWD. To mitigate the impacts from additional of impervious surface added by the development, an increase of approximately 50% of the overall project site, the storm flows for the project development north of the ridgeline will be conveyed into two extended detention basins (Basin 2 and 3, see Figure 23.1 above) each treating approximately half of project area north of the ridgeline which is then released into the northern drainage course. The storm flows from the project development south of the ridgeline are conveyed into a single extended detention basin (Basin 1, see Figure 23.1above) which is released into the southern drainage course. (Adkan 2023a, pp. 7).

The two natural drainage courses located north and south of the project development will be protected and will not be altered as part of the project. Within these drainage courses will two culvert crossings proposed. There will be one culvert crossings are located in the northerly existing drainage course and the on culvert southerly existing drainage course and allow the development to provide access and utilities over the existing drainage courses. The culverts have been designed in accordance with the California Department of Fish and Wildlife (CDFW) to have a minimum size of 72" for the purposes of providing a downstream and upstream connection for habitat and wildlife within the drainage corridor. This results in culverts larger than necessary to convey the actual flow experience by a 100-year storm event. The culverts also contain the necessary headwalls, cutoff walls, and rip-rap energy dissipaters to reduce the storm flow velocities to a non-erosive level protecting the downstream drainage courses. (Adkan 2023a, pp. 7)

As discussed within the Existing Drainage Condition section, it was determined through discussion with RCFC that additional post development increased storm water runoff mitigation would be necessary beyond the 2-, 5-, and 10-year storm events, and therefore the extended detention basins for the project have been designed designed with the capacity to mitigate the 100-year storm events. These calculations were performed utilizing the Synthetic Unit Hydrograph Method and a summary of the results are included within the tables above within Section 25(a) "Hydrology and Water Quality", for Basin 1, 2 and 3

comparing the existing flow rates with the proposed flow rates when mitigated through attenuation of storm runoff within proposed extended detention basins. (Adkan 2023a, pp. 7).

Because the proposed Project has been designed to attenuate post-development runoff from the site utilizing extended detention basins, Project-related runoff would not substantially increase the rate or amount of surface runoff in downstream areas in a manner that would result in flooding on- or off-site and the downstream water courses would not be impacted due to the addition of impervious areas. Additionally, by the protection and conservation of the two natural drainage courses located north and south of the project development the existing drainage course will be respected and downstream flows would not be affected or diverted. Accordingly, a less-than-significant impact would occur.

d) All runoff from proposed development areas within the tributary drainage areas would be treated by extended detention basins prior to runoff, which would remove sediments, and because peak flow rates would also be decreased, as discussed within Section 25(a) "Hydrology and Water Quality", above, the Project would not substantially alter the existing drainage velocities of the site or area, including the alteration of the velocities of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site, thus the impacts would be less than significant.

e) As discussed within Section 25(c) "Hydrology and Water Quality", above, the Project would result in a net decrease in the rate of runoff from the site under 100 year, 10-year and 2-year storm conditions. Because the proposed Project has been designed to attenuate post-development runoff from the site, Project-related runoff would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site. Furthermore, all onsite drainage facilities have been designed to convey the 100-year storm event per the requirements of the Riverside County Transportation Department and Riverside County Flood Control. Accordingly, the impacts would be less than significant.

f) As discussed within within Section 25(c) "Hydrology and Water Quality", above, the Project would result in a net decrease in the rate of runoff from the site under 100-year, 10-year and 2-year storm conditions. Because the proposed Project has been designed to attenuate post-development runoff from the site, Project-related runoff would not substantially increase the rate or amount of surface runoff in downstream. Additionally, the downstream facilities, "Harrison Dam", were design by Riverside County Flood Control based on the land use designation of the project site. The Project is not proposing to increase the density and impervious areas associated with the underlying land use, therefore the assumption for offsite run-off to the Harrison Dam facility have not increased and the Project would not exceed the downstream capacity, thus the impacts would be less than significant.

Furthermore, all sources of pollutants associated with a residential development have been identified within the Project Specific Water Quality Management Plan (WQMP). The WQMP identifies non-structural and structural source controls as well as Project design features and BMPs to treat the pollutants identified as a source of contamination. In this case the Project is proposing to treat the expected pollutants of concern with three extended detention basins, locations shown within Figure 23.1. The Extended Detention Basin (EDB) is designed to detain the design volume of stormwater, VBMP, and maximize opportunities for volume losses through infiltration, evaporation, evapotranspiration and surface wetting. Additional pollutant removal is provided through sedimentation, in which pollutants can attach to sediment accumulated in the basin through the process of settling. Stormwater enters the EDB through a forebay where any trash, debris, and sediment accumulate for easy removal. Flows from the

forebay enter the basin which is vegetated with native grasses that enhance infiltration and evapotranspiration, and which is interspersed with gravel-filled trenches that help further enhance infiltration. Water that does not get infiltrated or evapotranspired is conveyed to the bottom stage of the basin. At the bottom stage of the basin, low or incidental dry weather flows will be treated through a sand filter and collected in a subdrain structure. Any additional flows will be detained in the basin for an extended period by incorporating an outlet structure that is more restrictive than a traditional detention basin outlet. The restrictive outlet structure extends the drawdown time of the basin which further allows particles and associated pollutants to settle out before exiting the basin, while maximizing opportunities for additional incidental volume losses. Accordingly with the incorporation of the extended detention basins, the Project would not generate substantial additional sources of polluted runoff, therefore the impacts would be less than significant.

g) According to FEMA Flood Insurance Rate Map (FIRM) Map No. 06065C1385G, the Project site is located within "Zone X (unshaded)," which is defined as an area not subject to 100- year flood hazards (FEMA, 2008). Accordingly, the Project has no potential to place housing or structures within a flood hazard zone that would potentially impede or redirect flood flows. Additionally, the proposed project contains two existing drainage courses. The project is proposing to conserve both drainage courses as discussed within Section 7, "Biological Resources", and no grading and or obstructions are proposed within the existing drainage courses with the exception of the two 72" culvert crossings which have been designed to convey the 100-year storm event. Furthermore, all other proposed drainage crossings have been designed to convey the 100-year storm events and will allow all run-on flows to continue downstream without impeding or redirecting flood flows. Accordingly, impacts would be less than significant.

h) As discussed within within Section 25(f) "Hydrology and Water Quality", above, according to FEMA Flood Insurance Rate Map (FIRM) Map No. 06065C1385G, the Project site is located within "Zone X (unshaded)," which is defined as an area not subject to 100- year flood hazards (FEMA, 2008). Accordingly, the project is not within a flood hazard area and does not have the risk of inundation. Additionally, without the risk of inundation and pollutants from the Project will be conveyed the project design features and BMP's as identified with the project specific WQMP for treatment and removal. Thus, impacts would be less than significant

A seiche is a free-standing wave oscillation on the surface of water in an enclosed or semi-enclosed basin. The wave can be initiated by an earthquake and can vary in height from several centimeters to a few meters. The Project site is located 0.5 mile north of Lake Mathews; however, and as noted by EIR No. 441, which addresses the County's 2021 update to the General Plan, only two water bodies in Riverside County have the potential to result in a seismically-induced seiche that could affect occupied property; Lake Elsinore and Lake Perris Reservoir (Riverside County, 2020b), and there would be no impacts.

The County of Riverside is not located within a Tsunami Hazard Area as identified by the California Department of Conservation. and there would be no impacts.

i) The Project is consistent with the County's NPDES permit requirements, as stipulated in the CWA, and would reduce impacts to water quality associated with Project-related activities. The project is not located within a regional water quality management plan, however the Project under the NPDES permit requires the preparation of a site-specific post-construction management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic controls. A WQMP

was prepared for the proposed Project and identifies non-structural and structural source controls as well as Project design features and BMPs. Additionally, the Project site is not located within a Groundwater Management Zone and/or Plan and has no potential to interfere substantially with groundwater recharge. Accordingly, there would be no impacts.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

LAND USE AND PLANNING Would the project:				
24. Land Use				
a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Source(s): Project Application Materials; Riverside County General Plan (Riverside County, 2020a); Lake Mathews / Woodcrest Area Plan (Riverside County, 2020c); City of Riverside General Plan Land Use Element (City of Riverside, 2021)

Findings of Fact:

a) The Project site consists of approximately 95.96 acres of land which is predominantly undeveloped under existing conditions. Development of the Project site by the proposed construction and operation of residential, recreational, and open space uses would not physically disrupt or divide the arrangement of an established community. Existing and proposed residential communities surround the Project site to the north, east, and southwest; however, there are no components of the proposed Project with the potential to physically divide any of these existing or planned communities. Upon completion of the proposed Project, pedestrian pathways and public roadways would be accommodated in portions of the development, which would ensure that access to and between surrounding residential neighborhoods would not be affected. Therefore, the Project would not physically divide an established or planned community and thus impacts would be less than significant.

b) The Project would not conflict with any applicable General Plan policies adopted for the purpose of avoiding or reducing significant environmental effects. As part of its review of the proposed Project, Riverside County evaluated the Project's consistency with applicable General Plan policies and determined that the Project conforms to all applicable General Plan policies, including the policies listed within the LMWAP and the LMWAP El Sobrante Policy Area. The current land use is a mixture of Low Density Residential (LDR), 67.02 acres, and Very Low Density Residential (VLDR), 28.94 acres. The densities outlined within the general plan specify two units per acre for LDR and one unit per acre for VLDR. Based on the Project acreages the maximum unit count is 163 total residential units, consist with the proposed Projects subdivision map. Furthermore, per the LMWAP El Sobrante Policy Areas the lot sizes are a minimum of 10,000 square feet, consistent with the Projects proposed lot sizes.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Additionally, the project site is located within an Agricultural Preserve (El Sobrante No. 1). The agricultural preserve precludes use of the Project site for any use other than agriculture uses. The Project proposes an Agricultural Preserve Diminishment to remove the Project site from the El Sobrante No. 1 Agricultural Preserve area (APD240004). Approval of APD240004 by the Riverside County Board of Supervisors would eliminate any potential General Plan land use inconsistency that may result from future development of the subject property with residential land uses.

Based on the Project's consistency with the General Plan Policies, impacts due to an inconsistency with the land use designations and/or policies of the General Plan adopted for the purpose of reducing or avoiding significant environmental effects would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

MINERAL RESOURCES Would the project:				
25. Mineral Resources a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure OS-6 "Mineral Resources Area" (Riverside County 2020a); Riverside County General Plan EIR No. 441, Figure 4.12.1 (Riverside County, 2020b); Riverside County Information Technology – Map My County (RCIT, 2023); Google Earth Pro (Google Earth, 2023); California Department of Conservation, Mineral Resources Maps for the Temescal Valley (CDC, 1991)

Findings of Fact:

a) According to mapping information from the California Department of Conservation (CDC), the Project site is located within the "MRZ-3" Mineral Resource Zone. This category represents "Areas containing known or inferred mineral occurrences of undetermined mineral resource significance" (CDC, 1991, Plates 2A, 3A, 4A, 5A, and 6A). Accordingly, implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State, and no impact would occur.

b) Neither the County's General Plan nor the LMWAP identify the Project site as comprising a locally important mineral resources recovery site, and there are no other plans applicable to the Project site that designate it for mineral resources recovery. Accordingly, no impact would occur

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

c) According to Riverside County GIS records, there have been no surface mining permits issued within the Project vicinity, indicating that there are no existing surface mines in the Project vicinity (RCIT, 2023). Additionally, there are no State classified or designated areas for mineral resources within the Project vicinity. There are no mines or quarries proposed by the Project nor are any existing or former mines known to exist on the site or in the surrounding area (Google Earth, 2023). Due to the lack of surface mines in the Project vicinity, the Project would not expose people or property to hazards resulting from past or present mining activities, nor would the Project be an incompatible use with any proposed or existing surface mines. As such, no impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

NOISE Would the project result in:				
26. Airport Noise a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
b) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure S-20 "Airport Locations" (Riverside County, 2020a); Riverside County Information Technology – Map My County (RCIT, 2023); Google Earth Pro (Google Earth, 2023)

Findings of Fact:

a) The Project site is located approximately 5.2 miles southwest of the nearest runway at the Riverside Municipal Airport, which is the nearest public airport facility. The Project site is not located within any known Airport Influence Area or Airport Safety Zone for any public airports. A small, private airstrip is located approximately 0.5-mile south of the Project site (north of Lake Mathews); however, based on aerial photographs from Google Earth, this airstrip has not been operational since at least 2011. The Project site is not located within the vicinity of any active private airports or heliports. (RCIT, 2016; Google Earth, 2016) Accordingly, implementation of the project does not have the potential to result in an inconsistency with an Airport Master Plan and the Project would not expose people residing or working in or near an airport/airstrip in the vicinity of the Project site to excessive noise levels. Further analysis of airport-related impacts will not be required.

b) As discussed within Section 26(a) "Airport Noise", above, the project is nor located within the vicinity of a private airstrip exposing people residing or working in the project to excessive noise levels and therefore no impact would occur.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Monitoring: No monitoring is required.

27. Noise Effects by the Project a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐

Source(s): Riverside County General Plan, Table N-1 ("Land Use Compatibility for Community Noise Exposure") (Riverside County, 2020a); Project Application Materials; Noise Impact Analysis (Vista Environmental, 2023a)

Findings of Fact:

a) The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the County standards. (Vista Environmental, 2023a, p. 28)

Construction-Related Noise

The construction activities for the proposed project are anticipated to include site preparation and grading up to 85.34 acres of the 96.96-acre project site plus up to 2.8 acres of offsite area, building construction of 163 single-family homes and a Park, paving of the onsite roads and offsite access roads, sidewalks and hardscapes, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are residents at the single-family homes located as near as 140 feet east of the project site and 200 feet north of the project site. There is also a ranch home as near as 100 feet west of the proposed access road on the south side of the project site. (Vista Environmental, 2023a, p. 26)

General Plan Policy N 13.1 requires that construction noise impacts to be minimized on adjacent uses through acceptable practices. General Plan Policy N 13.2 requires that construction activities are limited to established hours of operation in order to mitigate the generation of excessive or adverse noise impacts on the surrounding community. Riverside County Ordinance No. 847 provides the established hours of construction operations, and details that construction activities that occurs between 6:00 a.m. and 6:00 p.m. during the months of June through September and between 7:00 a.m. and 6:00 p.m. during the months of October through May are exempt from the Noise Ordinance. General Plan Policy N 13.3 requires construction of subdivisions that are adjacent to occupied noise sensitive land uses to submit a construction-related noise mitigation plan to the County that depicts how construction noise will be mitigated through use of temporary noise fences, preferred location of equipment and use of current noise suppression technology and equipment. Project Design Feature 1 has been included in this analysis to ensure compliance with General Plan Policy N 13.3 that requires the County to review and approve a

construction-related noise mitigation plan, prior to issuance of the grading permit for the proposed project. General Plan Policy 13.4 requires that all construction equipment utilize noise reduction features (e.g. mufflers and engine shrouds) that are no less effectively than what was originally installed by the manufacturer. As detailed above, through implementation of Project Design Feature 1, construction of the proposed project would not exceed the applicable standards in the General Plan and Municipal Code. (Vista Environmental, 2023a, p. 28-29)

However, the County construction noise standards do not provide any limits to the noise levels that may be created from construction activities and even with adherence to the County standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby residents. In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 80 dBA during the daytime at any of the nearby homes. (Vista Environmental, 2023a, p. 29)

Construction noise levels to the nearby homes have been calculated through use of the RCNM and the parameters and assumptions detailed for Construction Equipment Noise Emissions and Usage Factors. The results are shown below in Table 27.1:

Table 27.1 – Construction Noise Levels at the Nearby Homes

	Construction Noise Level (dBA Leq) at Nearest:	
Construction Phase	**Homes to Project Site[1]**	**Home to Street A[2]**
Site Preparation	63	74
Grading	62	75
Building Construction	61	74
Paving	56	68
Painting	48	65
FTA Construction Noise Threshold[3]	**80**	**80**
Exceed Thresholds?	**No**	**No**

[1] The nearest homes to the project site are located as near as 1,000 feet northeast from the center of project site and as near as 250 feet from potential blasting areas.
[2] The nearest home to Street A is located as near as 130 feet west of the center of Street A.
[3] The FTA Construction noise thresholds for Residential Land Uses
Source: RCNM, Federal Highway Administration, 2006

Table 27.1 shows that the greatest noise impacts would occur at the nearest home to the project site during the site preparation phase, with noise levels as high as 63 dBA Leq and at the nearest homes to Street "A" during the grading phase, with noise levels as high as 75 dBA. All calculated construction noise levels shown in Table 27.1 are within the FTA daytime construction noise standard of 80 dBA averaged over eight hours. Therefore, through adherence to the allowable construction times detailed in Section 9.52.020(I) of the Municipal Code and through implementation of Project Design Feature 1, that requires the preparation of a construction-related noise mitigation plan, prior to the issuance of the grading plan for the proposed project, the proposed project would not create a substantial temporary increase in ambient noise levels from construction of the proposed project. Impacts would be less than significant. (Vista Environmental, 2023a, p. 29)

Operational-Related Noise

The proposed project would consist of the development of 163 single-family detached homes and a Park. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways and from activities at the proposed Park that may create exterior and interior noise levels in excess of County standards at the proposed homes. It should be noted that the proposed homes would be located over a 1,000 feet away from El Sobrante Road, which is the nearest major roadway to the project site. As such, the proposed homes would not be exposed to excessive roadway noise level impacts. The noise impacts to the nearby homes from roadway noise and from the proposed Park have been analyzed separately below. (Vista Environmental, 2023a, p. 29)

Roadway Vehicular Noise Impacts to Nearby Homes

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the proposed project. (Vista Environmental, 2023a, p. 30)

Neither the General Plan nor the Municipal Code defines what constitutes a "substantial permanent increase to ambient noise levels". As such, this impact analysis has utilized guidance from the Federal Transit Administration for a moderate impact that shows that the project contribution to the noise environment can range between 0 and 7 dB, which is dependent on the existing roadway noise levels. (Vista Environmental, 2023a, p. 30)

The potential offsite traffic noise impacts created by the on-going operations of the proposed project have been analyzed through utilization of the FHWA model and the FHWA model traffic noise calculation spreadsheets are provided in Appendix D. The proposed project's potential offsite traffic noise impacts have been analyzed for the existing year, existing plus ambient year 2028, and existing plus ambient year 2028 plus cumulative projects scenarios that are discussed separately below. (Vista Environmental, 2023a, p. 30)

Existing Year Conditions

The proposed project's potential offsite traffic noise impacts have been calculated through a comparison of the Existing scenario to the Existing With Project scenario. The results of this comparison are shown in Table 27.2.

Table 27.2 – Existing Year Project Traffic Noise Contributions

		dBA CNEL at Nearest Receptor[1]			
Roadway	Segment	Existing	Existing Plus Project	Project Contribution	Increase Threshold[2]
La Sierra Avenue	North of SR-91 Westbound Ramps	68.5	68.5	+0.0	+1 dBA
La Sierra Avenue	South of Indiana Avenue	67.0	67.1	+0.1	+1 dBA
La Sierra Avenue	South of Victoria Avenue	68.6	68.8	+0.2	+1 dBA
La Sierra Avenue	South of McAllister Parkway	69.3	69.5	+0.2	+1 dBA
La Sierra Avenue	North of El Sobrante Road	65.0	65.2	+0.2	+1 dBA
El Sobrante Road	West of McAllister Parkway	63.7	64.1	+0.4	+2 dBA
El Sobrante Road	West of Street A	65.0	65.5	+0.5	+1 dBA
El Sobrante Road	East of Street A	66.3	66.4	+0.1	+1 dBA

Notes:
[1] Distance to nearest sensitive receptors based on Speed per PHWA Model Roadway Parameters, does not take into account existing noise barriers.
[2] Increase Threshold obtained from the FTA's allowable noise impact exposures.
Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table 27.2 shows that the proposed project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA's allowable traffic noise increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the existing conditions. Impacts would be less than significant. (Vista Environmental, 2023a, p. 31)

Existing Plus Ambient Growth Year 2028 Conditions

The proposed project's potential offsite traffic noise impacts have been calculated through a comparison of the existing plus ambient growth year 2028 scenario to the existing plus ambient growth year 2028 with project scenario. The results of this comparison are shown in Table 27.3.

Table 27.3 – Existing Plus Ambient Growth Plus Cumulative Projects Traffic Noise Contributions

		dBA CNEL at Nearest Receptor[1]			
Roadway	Segment	Cumulative Without Project	Cumulative With Project	Project Contribution	Increase Threshold[2]
La Sierra Avenue	North of SR-91 Westbound Ramps	69.4	69.5	+0.1	+1 dBA
La Sierra Avenue	South of Indiana Avenue	67.8	67.9	+0.1	+1 dBA
La Sierra Avenue	South of Victoria Avenue	69.5	69.7	+0.2	+1 dBA
La Sierra Avenue	South of McAllister Parkway	70.1	70.2	+0.1	+1 dBA
La Sierra Avenue	North of El Sobrante Road	65.8	66.0	+0.2	+1 dBA
El Sobrante Road	West of McAllister Parkway	64.9	65.2	+0.3	+1 dBA
El Sobrante Road	West of Street A	65.6	66.1	+0.5	+1 dBA
El Sobrante Road	East of Street A	67.0	67.1	+0.1	+1 dBA

Notes:
[1] Distance to nearest sensitive receptors based on Speed per PHWA Model Roadway Parameters, does not take into account existing noise barriers.
[2] Increase Threshold obtained from the FTA's allowable noise impact exposures.
Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table 27.3 shows that the proposed project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA's allowable traffic noise increase

thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the existing plus ambient growth plus cumulative projects year 2028 conditions. Impacts would be less than significant. (Vista Environmental, 2023a, p. 32)

Proposed Onsite Park Noise Impacts

The proposed project includes development of a Park that would contain a grass playfield, a disc golf course, a walking trail with slides and sitting areas with possible shade structures. Section 9.52.040 of the County's Municipal Code limits noise created at the Park onto the proposed residential properties to 55 dBA between 7 a.m. and 10 p.m. and to 45 dBA between 10 p.m. and 7 a.m.. It should be noted that the proposed Park would be located as near as 1,300 feet to the existing homes, as such, no Park noise impacts are anticipated to occur at the nearby existing homes. (Vista Environmental, 2023a, p. 32)

Table 27.4 provides a summary of the reference noise levels and the anticipated noise level from each source at the nearest proposed home to each noise source. Since the nearest home to each noise source in the Park would be located on different side of the Park, it is unlikely that any single home would be impacted by multiple noise sources from the proposed park and as such each noise source has been analyzed separately. The noise levels at the nearby homes were calculated based on standard geometric spreading of noise, which provides an attenuation rate of 6 dB per doubling the distance between source and receptor. (Vista Environmental, 2023a, p. 32)

Table 27.4 – Proposed Park Operational Noise Levels at the Nearest Homes

	Reference Noise Measurements		Calculated Noise Levels		County Day/ Night Standards (dBA Leq)	Exceed County Standards?
Noise Source	Distance to Source (feet)	Reference Noise Level (dBA Leq)	Nearest Home (feet)	Noise Level[1] (dBA Leq)		
Disc Golf[1]	5	49.5	20	37	55/45	No/No
Grass Playfields[2]	5	58.9	50	39	55/45	No/No
Shade Structures[3]	10	45.7	55	31	55/45	No/No
Walking Trails[4]	5	45.0	40	27	55/45	No/No

Notes:
[1] Based on a reference measurement of a 9 hole golf course.
[2] Based on a reference measurement of a soccer game.
[3] Based on a reference measurement of a park with a lunch shelter.
[4] Based on a reference measurement of a nature trail.
Source: Vista Environmental (see Appendix E)

Table 27.4 shows that that noise from all of the proposed Park activity areas noise sources would be within both the County's daytime residential exterior noise standards of 55 dBA Leq during the daytime and 45 dBA Leq during the nighttime at the nearest home to each noise source. It should be noted that the nearby existing homes are all located further away to each source than the proposed homes, and as such the impacts to the nearby existing homes would be lower than what is shown in Table 27.4. Therefore, the proposed Park operational noise levels would result in a less than significant impact. (Vista Environmental, 2023a, p. 33)

b) The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include site preparation and grading up to 85.34 acres of the 96.96-acre project site plus up to 2.8 acres of offsite area, building construction of 163 single-family homes and a Park, paving of the onsite roads and offsite access roads, sidewalks and hardscapes, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment and from blasting activities. The nearest sensitive receptor to the off-road equipment construction activities associated with the proposed project is a ranch home as near as 100 feet west of the proposed Street A on the south side of the project site. The nearest sensitive receptor to possible areas to be blasted are the single-family homes located as near as 250 feet east of the potential areas to be blasted. (Vista Environmental, 2023a, p. 33)

Since neither the Municipal nor the General Plan provide a quantifiable vibration threshold for temporary construction activities, guidance from the Transportation and Construction-Induced Vibration Guidance Manual, prepared by Caltrans, April 2020, has been utilized, which defines the threshold of perception from transient sources such as off-road construction equipment at 0.25 inch per second peak particle velocity (PPV). (Vista Environmental, 2023a, p. 33)

The primary source of off-road equipment vibration during construction would be from the operation of a bulldozer. From Table K above a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. Based on typical propagation rates, the vibration level at the nearest home to construction activities (100 feet away) would be 0.019 inch per second PPV. The vibration level at the nearest home would be below the 0.25 inch per second PPV threshold detailed above. Off-road equipment vibration impacts would be less than significant. (Vista Environmental, 2023a, p. 32)

The project applicant has stated that limited blasting may be required to remove rock outcroppings on the project site. There are the single-family homes located as near as 250 feet away from the potential areas to be blasted. According to Figure 6 from the Transportation and Construction-Induced Vibration Guidance Manual, prepared by Caltrans, April 2020 (see Figure 5, above), at 250 feet away from blasting the vibration level would range between 0.005 and 0.1 inch per second PPV. The vibration level at the nearest home would be below the 0.25 inch per second PPV threshold detailed above. In addition, all blasting activities would be required to adhere to all applicable regulations, including Title 8 Section 5291 of the California Code of Regulations that requires the blaster to be licensed as well as provides the procedures to be followed before, during and after a blasting event to ensure safety as well as minimize blasting impacts to the nearby homes. For these reasons, blasting vibration impacts would be less than significant. (Vista Environmental, 2023a, p. 34)

Operations-Related Vibration Impacts

The proposed project would consist of the development of a residential community with 163 single-family detached homes and a Park. The on-going operation of the proposed project would not include the operation of any known vibration sources other than typical onsite vehicle operations for a residential development. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project. (Vista Environmental, 2023a, p. 34)

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Monitoring: No monitoring is required.

PALEONTOLOGICAL RESOURCES:				
28. Paleontological Resources a) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure OS-8 "Paleontological Sensitivity" (Riverside County, 2020a); Riverside County Information Technology – Map My County (RCIT, 2023); Paleontological Assessment for the TR38605 Project (BFSA, 2023b)

Findings of Fact:

a) According to the Riverside County Land Information System, the Project site has "Low Potential" to yield nonrenewable paleontological resources. A field survey conducted by BFSA did not identify any fossils or sedimentary rock types that might have yielded any fossiliferous remains. In addition, based on the granitic nature of the mixed granodiorite and gabbro bedrock across the entire Project site, there is a minimal likelihood that any fossiliferous deposits would be present within the Project site. Furthermore, Holocene alluvial deposits in stream bottoms and along dry washes across the property are geologically too young to contain paleontological resources. (BFSA, 2023b, pp. 1-2) Based on the foregoing, the Project would not directly nor indirectly destroy a unique paleontological resource, or site, or unique geologic feature; therefore, impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

POPULATION AND HOUSING Would the project:				
29. Housing a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	☐	☐	☐	☒

Source(s): Riverside County General Plan Housing Element (Riverside County, 2020a); Riverside County Information Technology – Map My County (RCIT, 2023); Project Application Materials

Findings of Fact:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

a) Implementation of the Project would provide 163 residential units which would potentially result in the addition of up to 544 new residents to the area. Additionally, the Project would install infrastructural improvements such as paved roads and access to improved and expanded water and sewer lines which could indirectly induce growth in the local area. However, off-site improvements would merely upgrade existing facilities as needed to support development of the site, and would not accommodate any new growth in the area beyond what is already accommodated by existing facilities. Additionally, the majority of surrounding properties are either entitled for development or under construction, and there is no component of the project that would increase the rate of development on surrounding lands Thus, the potential for the Project to induce substantial population growth would be less than significant.

b) Under existing conditions, no housing units are located on the Project site. As such, implementation of the proposed Project would not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. Additionally, development of the proposed Project would increase the number of available housing units in Riverside County. Accordingly, no impact would occur.

c) The Project proposes to develop the site with 95.96 acres of residential land uses and 45.57 acres of recreational land uses. The Project would provide new housing opportunities to the region and would not generate any demand for new affordable housing within the County. Additionally, the Project does not propose land uses that would generate employment (i.e., schools, commercial buildings, etc.) that would result in an increased demand for affordable housing. Implementation of the proposed Project would create 163 additional residential units in Riverside County, which would help meet housing demands for Riverside County. Accordingly, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
30. Fire Services	☐	☐	☒	☐

Source(s): Riverside County General Plan Safety Element (Riverside County, 2020a); Riverside County General Plan EIR No. 441 – Public Facilities (Riverside County, 2020b)

Findings of Fact:

The Project's proposal to develop 163 single-family residential homes, recreational areas, and open space would place additional demand on the County Fire Department and would cumulatively affect the Department's ability to service the planned population. The Project would require an "Urban-Category III" level of service as defined by the Riverside County Fire Protection Master Plan. This classification requires a fire station be within three roadway miles of the Project site, and a full first alarm assignment team

operating on the scene within 15 minutes of dispatch. The primary station serving the Project area (Station 82, Lake Hills) is located approximately 3.0 roadway miles from the Project site (Google Earth, 2023). Based on the travel distance between the Project site and Station 82, the first unit should arrive at the proposed Project site within approximately eight minutes after dispatch. The estimated response time is approximate but demonstrates that the RCFD would be able to meet the Urban-Category III Land Use protection goals of the Fire Protection Master Plan for the Project.

As a condition of Project approval, the proposed Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard Riverside County Fire Department conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the Project.

The Project site is located in the State Responsibility Area "High Fire Hazard Severity Zone." As a condition of Project approval, the Project would also be required to conform to the special construction provisions contained in Riverside County Ordinance 787.8, Title 14, the California Building Code, California Fire Code, Riverside County Land Division Ordinance, and Riverside County Fire Department Information Bulletin #08-05 Fuel Modification Standard. As part of the Project's conditions of approval, plans would be required to be submitted for the Fire Department for review and approval prior to building permit issuance in order to demonstrate compliance with the applicable construction provisions.

Development of the proposed Project would impact fire services by placing an additional demand on existing County Fire Department resources and personnel. In accordance with the Riverside County Fire Protection Master Plan, a new fire station and/or appropriate fire company is required for the development of 2,000 dwelling units or more. The Project proposes the development of 163 dwelling units and recreational areas, and open space; therefore, the proposed Project would not directly result in the need for any new fire stations. However, the proposed Project would impact the fire department's ability to provide an adequate level of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. The Project is required to adhere to Riverside County Ordinance No. 659, which requires payment of a DIF to assist the County in providing for fire protection facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction. Accordingly, Project-related impacts to fire protection services are evaluated as less than significant and no mitigation beyond payment of DIF fees would be required.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

31. Sheriff Services	☐	☐	☒	☐

Source(s): Riverside County General Plan (Riverside County, 2020a); Riverside County General Plan EIR No. 441 – Public Facilities (Riverside County, 2020b)

Findings of Fact:

The Project would result in an approximate population increase of 544 residents. The incremental increase in population to the region could result in an incremental increase in criminal activity such as burglaries, thefts, auto thefts, vandalism, etc. However, according to the Riverside Sheriff's Department, there is not a direct correlation between population growth, the number of crimes committed, and the number of Sheriff's Department personnel needed to respond to these increases. As the population and use of an area increases, however, additional financing of equipment and manpower needs are required to meet the increased demand. The proposed Project would result in an increase in the cumulative demand for services from the Riverside Sheriff's Department.

Riverside County has set a minimum standard of 1 deputy per 1,000 people. This standard was adopted as part of the "Commitment to Public Safety and Citizens' Option for Public Safety," by the Board of Supervisors on September 17, 1996. The Sheriff's Department has indicated that their desired staffing level is 1.2 deputies per 1,000 people. Additionally, Mitigation Measure 4.15.C of EIR No. 441 states that Riverside County shall meet and maintain a goal of 1.5 sworn peace officers per 1,000 population.

In order to maintain the desirable level of service established by EIR No. 441 Mitigation Measure 4.15.C, build-out of the proposed Project would generate a need for approximately two (2) additional sworn peace officers (1,129 total residents × 1.5 sworn peace officers/1,000 persons = 1.7 sworn peace officers), and two (2) additional patrol cars. Staff necessary to support the additional deputies would include an appropriate level of civilian, investigation, and supervisory personnel. The proposed Project would not, however, in and of itself result in the need for new or expanded sheriff facilities.

The Project's impact to sheriff protection services would not be regarded as significant on a direct basis because the Project would not create the need to construct a new Sheriff station or physically alter an existing station to accommodate the additional personnel. However, the Project would be required to comply with Riverside County Ordinance No. 659, which requires a DIF payment to the County for impacts to public services and facilities, including sheriff facilities and services. Payment of the DIF fee would ensure that funds are available for either the purchase of new equipment and/or the hiring of additional sheriff personnel to maintain the County's desired level of service for sheriff protection.

In addition, implementation of a Neighborhood Watch Program between the Project's Home Owner Association and the Sheriff's Department, as would occur through the County's implementation of EIR No. 441 Mitigation Measure 4.15.2B, would further reduce impacts on sheriff resources.

Therefore, implementation of the Project would not result in the need for new or expanded sheriff facilities, and impacts would be less than significant. The Project's incremental demand for sheriff protection services also would be less than significant because the Project would be required to contribute DIF fees. Accordingly, a less-than-significant impact would occur with respect to sheriff protection services or facilities as a result of implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
32. Schools	☐	☐	☒	☐

Source(s): Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County General Plan (Riverside County, 2020a); Riverside County General Plan EIR No. 441 – Public Facilities (Riverside County, 2020b)

Findings of Fact:

The Project proposes to develop the site with 163 single-family residences. The Project would be required to contribute fees to the RUSD in accordance with Public Education Code § 17072.10-18. Pursuant to the Leroy F. Greene School Facilities Act of 1998, payment of school impact fees constitutes full and complete mitigation for project-related impacts to school services. Accordingly, Project impacts to school services would not occur and no mitigation beyond payment of fees would be required.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

33. Libraries	☐	☐	☒	☐

Source(s): Riverside County General Plan (Riverside County, 2020a); Riverside County General Plan EIR No. 441 – Public Facilities (Riverside County, 2020b)

Findings of Fact:

Development of the Project would increase the region's population, creating an additional demand for library facilities and services. Upon development of the site, the site would consist of single-family residential land uses, recreational area, and open space, which would result in an increase in the area's population by approximately 359 new residents.

Although use of the internet has resulted in decreased demand being placed on library services nation-wide, the County continues to maintain its standards for book titles and library square footage. To attain the level of service standard specified in the County's General Plan and EIR No. 441 of 0.5 square feet (s.f.) of library space and 2.5 titles per capita, the Project-generated population would require an additional 565 s.f. of library space and 2,822 book titles. (Riverside County, 2020b)

Although the Project ultimately would contribute to the need for expanded library space, the provision of such additional library space would be addressed through the County's compliance with EIR No. 441 Mitigation Measure 4.15.6.A. The Project would contribute funding towards the cost of new facilities through property taxes and payment of fees pursuant to Riverside County Ordinance No. 659. Although new library facilities could be considered for construction in the Lake Matthews/Woodcrest area, it is not possible to identify environmental impacts that may be associated with the construction of new or expanded library facilities until a specific proposal and design for the facility is prepared by Riverside County and/or the RCPLS. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this Initial Study. Environmental effects of such library facilities and any associated mitigation would be identified through a future CEQA process required in

association with any future proposals for new or expanded library facilities. Any mitigation measures required for new or expanded library facilities could be funded, in part, from property taxes and/or DIF fees allocated by Riverside County to such purposes. As such, Project impacts to library facilities and resources are evaluated as less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

34. Health Services	☐	☐	☒	☐

Source(s): Riverside County General Plan (Riverside County, 2020a); Riverside County General Plan EIR No. 441 – Public Facilities (Riverside County, 2020b)

Findings of Fact:

The nearest medical facility to the Project site is Kaiser Permanente Riverside Medical Center, located approximately 3.5 miles northwest of the Project site at 10800 Magnolia Avenue in the City of Riverside. The Project would introduce approximately 359 new residents to the area. According to Section 4.17, Public Facilities, of EIR No. 441, a population of 1,000 persons generates the need for 1.9 hospital beds (Riverside County, 2020b). Using the 1.9 hospital beds per 1,000 persons generation factor, the Project would generate the need for approximately two (2) additional hospital beds (359 residents × 1.9 hospital beds /1,000 residents = 0.7 hospital beds). The Project would remain consistent with the total amount of units and unit densities allowed on the site under the existing General Plan land use designations; therefore, medical needs accommodated by the General Plan would be sufficient for the Project site.

The provision of private health care is largely based on economic factors and demand and is beyond the scope of analysis required for Initial Study, EIR No. 441 concluded impacts associated with buildout of the General Plan would be less than significant, and further notes that: "compliance with…existing General Plan policy and existing Mitigation Measures 4.15.7A and 4.15.7B from EIR No. 441, would further reduce or avoid the insignificant impacts…" (Riverside County, 2020b). Mitigation Measure 4.15.7A requires the County to perform periodic medical needs assessments to evaluate the current medical demand and level of medical service provided within each Area Plan every three years. Mitigation Measure 4.15.7B requires the County to fund the new construction and/or expansion of existing medical facilities according to the level of demand for medical services based on the needs assessment required as part of Mitigation Measure 4.15.7A. Furthermore, mandatory compliance with County Ordinance No. 659 requires a development impact fee payment to the County that is partially allocated to public health services and facilities. As such, impacts to public medical facilities and resources associated with the proposed Project would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION Would the project:				
35. Parks and Recreation a) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐
c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?	☐	☐	☒	☐

Source(s): Ord. No. 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications) (Riverside County, 2023); Ord. No. 659 (Establishing Development Impact Fees) (Riverside County, 2023); Riverside County Information Technology – Map My County (RCIT, 2023); Riverside County Ordinance No. 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications) (Riverside County, 2023); Project Materials

Findings of Fact:

a) The Project would generate a future population of approximately 359 persons. According to Riverside County Ordinance No. 460, a minimum of 3.0 acres of parkland is required for each 1,000 residents of the County. Therefore, the Project would generate a demand for approximately 1.1 acres of parkland (359 persons x 3.0 acres/1,000 persons = 1.1 acres) to meet the recreational demands of the Project's future residents.

The Project proposes a community park within 2.76 acres. Thus, recreational facilities proposed by the Project would exceed the requirement to provide 1.1 acres of recreational use on site, pursuant to County Ordinance No. 460. Accordingly, the Project would comply with the parkland requirements of Ordinance No. 460. Additionally, the park would be available to all residents of public and would not be restricted only to residents of the Project.

Impacts due to the physical construction of on-site recreational facilities has been addressed under the relevant issue areas identified throughout this Initial Study (i.e., air quality, biological resources, cultural resources, etc.). Under each of these subsections, the Project's impacts were determined to be less than significant, or mitigation measures were imposed to reduce impacts to below a level of significance. There are no components of the planned recreation facilities on-site that have not already been addressed within this Initial Study. Accordingly, Project impacts due to construction of recreational facilities on-site would be less than significant.

b) In addition, because the Project would exceed the parkland demand of Ordinance No. 460, it is reasonable to conclude that future Project residents would not substantially contribute to the physical deterioration or accelerated deterioration of existing parks within the Project's vicinity. Accordingly, the Project would not include the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, and impacts would be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

c) According to Riverside County GIS, the Project site is not located within a CSA (RCIT, 2023). The Project site also is not located within any adopted Community Parks and Recreation Plan. Park land requirements for the proposed Project would be governed by Riverside County Ordinance No. 460, which allows for the dedication of park land in lieu or the payment of park land fees (i.e., Quimby Fees). As described above under the discussion of Thresholds a. and b., the Project would exceed the parkland dedication requirements set forth by Ordinance No. 460. Accordingly, the Project would accommodate adequate areas of active recreational uses on-site, and in-lieu fees (Quimby fees) would not be required. A less than significant would occur and mitigation would not be necessary.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

36. Recreational Trails a) Include the construction or expansion of a trail system?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure C-6 Trails and Bikeway System (Riverside County 2020a); Lake Mathews / Woodcrest Area Plan, Figure 8 (Riverside County, 2020c); Project Application Materials

Findings of Fact:

a) The Project would accommodate the ten-foot wide Muti Purpose Trail identified as part of the LMWAP Trails and Bikeways System through the Project site. In addition, the Project would accommodate ten-foot wide Private Trail segments along the Project's main backbone roadways internal to the Project. These trail alignments substantially conform to the LMWAP's planned alignment for these facilities; as such, there would be no conflict with the LMWAP's planned Community Trail segment through the Project site, and impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

TRANSPORTATION Would the project:				
37. Transportation a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Cause an effect upon, or a need for new or altered maintenance of roads?	☐	☐	☒	☐
e) Cause an effect upon circulation during the project's construction?	☐	☐	☒	☐
f) Result in inadequate emergency access or access to nearby uses?	☐	☐	☒	☐

Source(s): Riverside County General Plan; Project Application Materials; Greentree (TTM No. 38605) Traffic Analysis (Urban, 2023a); Greenhouse Gas Emissions Memorandum (Vista Environmental, 2023c); Riverside County Information Technology – Map My County (RCIT, 2023)

Findings of Fact:

a) The analysis of the Project to conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities, focuses on potential impacts to local roadway intersections and roadway segments, based on acceptable standards established by the County of Riverside and City of Riverside. The analysis in this section also includes an evaluation of potential impacts to CMP facilities under the jurisdiction of Caltrans, which include potential impacts to ramp junctions with SR-91. Traffic during the Project's construction phase is not analyzed herein because based on the construction characteristics, the volume of construction-related traffic would result in fewer peak hour and daily trips than would result from operation of either phase of the Project; thus, the analyses of the Project's operational traffic covers any impacts that could occur from construction- related traffic.

Analysis Scenarios

For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions (Urban, 2023a, p. 3):

- Existing (2023) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2028) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2028) Conditions

Existing 2023 Conditions

Information for Existing (2023) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. (Urban, 2023a, p. 3)

EAP 2028 Conditions

The EAP (2028) conditions analysis determines the potential circulation system deficiencies based on a comparison of the EAP traffic conditions to Existing conditions. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2023) conditions of 10.41% (2 percent per year, compounded over 5 years) is included for EAP (2028) traffic conditions. The assumed ambient growth factor is based on the requirements per the County of Riverside traffic study guidelines. Consistent with Riverside County traffic study guidelines, the EAP analysis is intended to identify "Opening Year" deficiencies associated with the development of the proposed Project based on the expected background growth within the study area. (Urban, 2023a, p. 4)

EAPC 2028 Conditions

The EAPC (2028) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2023) conditions of 10.41% (2 percent per year, compounded over 5 years) is included for EAPC (2028) traffic. Conservatively, this TA estimates the area ambient traffic growth and then adds traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed ambient growth rates; and some of these related projects may not be implemented and operational within the 2028 Opening Year time frame assumed for the Project. The resulting traffic growth utilized in the TA (ambient growth factor plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2028 conditions. (Urban, 2023a, p. 5)

Study Area

The 8 study area intersections were selected (Table 37.1) for evaluation in this TA based on consultation with County of Riverside staff. At a minimum, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the County's Guidelines. (1) The "50 peak hour trip" criterion represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and used throughout the County for the purposes of estimating a potential area of influence (i.e., study area). (Urban, 2023a, p. 5)

TABLE 37.1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection	Jurisdiction	CMP?
1	La Sierra Av. & SR-91 WB Ramps	City of Riverside, Caltrans	No
2	La Sierra Av. & SR-91 EB Ramps	City of Riverside, Caltrans	No
3	La Sierra Av. & Indiana Av.	City of Riverside	No
4	La Sierra Av. & Victoria Av.	County of Riverside, City of Riverside	No
5	La Sierra Av. & McAllister Pkwy.	County of Riverside	No
6	La Sierra Av. & El Sobrante Rd.	County of Riverside	No
7	McAllister Pkwy. & El Sobrante Rd.	County of Riverside	No
8	Street A & El Sobrante Rd.	County of Riverside	No

There are no study area intersections identified as a Riverside County CMP intersection. (Urban, 2023a, p.7)

This section provides a summary of deficiencies by analysis scenario. Section 2 Methodologies provides information on the methodologies used in the analysis and Section 5 EAP (2028) Traffic Conditions and Section 6 EAPC (2028) Traffic Conditions include the detailed analysis. A summary of LOS results for all analysis scenarios is presented in Table 37.2 (Urban, 2023a, p.7).

TABLE 37.2: SUMMARY OF LOS

#	Intersection	Existing		EAP		EAPC	
		AM	PM	AM	PM	AM	PM
1	La Sierra Av. & SR-91 WB Ramps						
2	La Sierra Av. & SR-91 EB Ramps						
3	La Sierra Av. & Indiana Av.						
4	La Sierra Av. & Victoria Av.						
5	La Sierra Av. & McAllister Pkwy.						
6	La Sierra Av. & El Sobrante Rd.						
7	McAllister Pkwy. & El Sobrante Rd.						
8	Street A & El Sobrante Rd.	N/A	N/A				

On-Site Recommendations

The following recommendations are based on the minimum improvements needed to accommodate site access and maintain acceptable peak hour operations for the proposed Project.

Recommendation 1 – Street A & El Sobrante Road (#8) – The following improvements are necessary to accommodate site access (Urban, 2023a, p. 9):

- Project to install a stop control on the southbound approach (Street A) to implement a cross-street stop- controlled intersection and construct a shared left-right turn lane.
- Project to construct an eastbound left turn lane with a minimum of 100-feet of storage.

Recommendation 2 – Street A is a north-south oriented roadway located south of the Project site, providing primary Project access to El Sobrante Road. Project to construct Street A at its ultimate full-section width as a Local roadway (60-foot right-of-way), from El Sobrante Road to the Project's southern boundary, consistent with the County's standards. (Urban, 2023a, p. 11)

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site. (Urban, 2023a, p. 11)

Sight distance at each project access point should be reviewed with respect to standard Caltrans and County of Riverside sight distance standards at the time of preparation of final grading, landscape, and street improvement plans. (Urban, 2023a, p. 11)

Off-Site Riverside County Recommendations within the County of Riverside

The recommended improvements needed to address the deficiencies identified under Existing (2023), EAP (2028), and EAPC (2028) traffic conditions are shown in Table 37.3. Improvements that appear under EAP (2028) that are not also identified for Existing (2023) traffic conditions would be the Project's responsibility to implement/construct in order to maintain acceptable LOS. For those remaining improvements listed in Table 37.3 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment

of fair share that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay fair share fees and participate in pre-existing fee programs consistent with the County's requirements. (Urban, 2023a, p. 11)

TABLE 37.3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO

#	Intersection Location	Jurisdiction	Analysis Scenario			Improvements in DIF, TUMF, etc.[1]	Project Responsibility[2]	Project Fair Share[3]
			Existing (2023)	EAP (2028)	EAPC (2028)			
6	La Sierra Av. & El Sobrante Rd.	County of Riverside	Install a Traffic Signal	Same	Same	No	Fair Share	21.7%

[1] Improvements included in TUMF Nexus or County DIF programs have been identified as such.

[2] Program improvements constructed by Project may be eligible for fee credit. In lieu fee payment is at discretion of County.

Represents the fair share percentage for the Project during the most impacted peak hour. Identifies the Project's responsibility to construct an off-site improvement, contribute fair share, or fee payment towards the improvements shown. If identified as a Project construct obligation/in a fee program, then no fair share percentage has been identified.

[3] Total project fair share is applicable to the improvements which are not already included in the County DIF/TUMF for those intersections wholly or partially within the County.

Therefore, with the implementation of **Mitigation Measures TRA-1 and TRA-2,** by incorporating the recommendation with thin the traffic analyses, any conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities would be mitigated and the impacts would be less than significant.

b) Riverside County adopted the Transportation Analysis Guidelines for Level of Service, Vehicle Miles Traveled (December 2020) to be compliant with CEQA Guidelines section 15064.3, subdivision (b) and provide screening criteria and methodology for vehicle miles traveled (VMT) analysis. The Vehicle Miles Traveled assessment prepared for the Project identified that the Project falls within the VMT screening criteria "Small Projects" because the Project does not exceed the threshold for Annual Greenhouse Gas Emissions. Therefore, this project will screen out from a VMT analysis, and is therefore consistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts will be less than significant.

c) The Project proposes a network of internal roadways that would be constructed within the Project site. During the County's review process for the Project's proposed Tentative Tract Map, the County of Riverside reviewed the proposed design plans to ensure that no hazardous roadway features would be implemented. The proposed community would not include any components that would result in incompatible uses on roadways, including heavy equipment, etc. Accordingly, the proposed Project would not create or substantially increase safety hazards due to a design feature or incompatible use. Impacts associated with this issue would be less than significant.

d) Implementation of the proposed Project would result in the establishment of several new roadways within the Project site; however, including a connection between the southern community entry and El Sobrante Road. Thus, with implementation of the Project, Riverside County would be responsible for maintaining the on-site streets and the connection between the southern community entry and El Sobrante Road. Maintenance of these facilities would be funded through the Project Applicant's payment of DIF fees and future Project residents' payment of property taxes, while maintenance of roadway landscape planned on site would be the responsibility of the Project's Homeowners' Association (HOA) or a Project Specific Community Facilities District (CFD). Therefore, the maintenance of roadways proposed by the Project would not deplete the County's general fund to the extent that programs protecting the environment cannot be funded, and impacts would be less than significant.

e) During the Project's construction phase and based on the Project description, the volume of construction-related traffic would result in fewer peak hour and daily trips than would result from the operation of the Project, as traffic only would be associated with construction workers arriving and leaving, and construction materials delivery. Additionally, there are no improved roadways on the Project site under existing conditions. The Project would construct a new roadway connecting the Project site to El Sobrante Road. These improvements could temporarily disrupt traffic on these roadways; however, any construction-related traffic impacts resulting from the Project would be addressed through the requirement to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Accordingly impacts during construction are to be less than significant.

f) The Project proposes a network of internal roadways that would be constructed within the Project site. During Riverside County's review of the Project's proposed Tentative Tract Map, the County reviewed the proposed design plans to ensure that adequate emergency access would be available at the site. Accordingly, the proposed Project would not result in inadequate emergency access during long-term operation of the Project. Impacts associated with this issue would be less than significant.

Due to temporary lane closures that may occur during the Project's construction phase, Project-related construction activities may conflict with emergency access routes and access to nearby uses during construction of the new roadway intersection with El Sobrante Road. Project-related construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. With the requirement to implement a temporary traffic control plan reviewed and approved by the County of Riverside Transportation Department a less than significant impact is identified.

Mitigation: The following **TRA Mitigation Measures** are required:

TRA-1

The following improvements shall be constructed or installed at the intersection of Street A & El Sobrante Road:

- Project to install a stop control on the southbound approach (Street A) to implement a cross-street stop- controlled intersection and construct a shared left-right turn lane.
- Project to construct an eastbound left turn lane with a minimum of 100-feet of storage.
- Street "A' shall be constructed at its ultimate width as a Local roadway (60-foot right-of-way), from El Sobrante Road to the Project's southern boundary, consistent with the County's standards.
- On-site traffic signing and striping should be installed in accordance with the Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

- Sight distance at the intersection of Street A & El Sobrante Road shall comply Caltrans and County of Riverside sight distance standards.

TRA-2

The developer shall make at fair share contribution for the installation of a traffic signal at the intersection of La Sierra Ave and El Sobrante Road in the amount of 21.7% of total cost of the traffic signal. The total cost of the traffic signal shall be determined by licensed Civil Engineer.

Monitoring:

Street Improvement Plans and Signing and Striping Plans shall be prepared by a licensed Civil Engineer and submitted to the County of Riverside Transportation Department (RCTD) for review and approval. The Street Improvements plans shall be reviewed for compliance with Caltrans Standards, Riverside County Transportation Standards, and CA MUTCD. Improvement Plans shall be reviewed and approved prior to the recordation of the final map. Street Improvements for Street A and the improvements at the intersection of Street A and El Sobrante Road shall be completed prior to the first building occupancy, excluding model home temporary occupancy. Fair share contributions per a cost estimated prepared by licensed Civil Engineer, reviewed and approved by the Riverside County Transportation Department, shall be paid prior to the first building occupancy, excluding model home temporary occupancy.

38. Bike Trails a) Include the construction or expansion of a bike system or bike lanes?	☐	☐	☒	☐

Source(s): Lake Mathews / Woodcrest Area Plan, Figure 8 (Riverside County, 2020c)

Findings of Fact:

a) According to Figure 8 of the LMWAP, a Class I Bike Path is planned along El Sobrante Road, which is located 0.58-mile south of the Project site (Riverside County, 2020c, Figure 8). The Project would accommodate the portion of the Class I Bike Path along the El Sobrante Project frontage. These bike trail alignments substantially conform to the LMWAP's planned alignment for these facilities; as such, there would be no conflict with the LMWAP's planned Community Trail segment through the Project site, and impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRIBAL CULTURAL RESOURCES Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
39. Tribal Cultural Resources a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)	☐	☒	☐	☐

Source(s): County Archaeologist; AB52 Tribal Consultation; CA Senate Bill 18 (SB 18, 2004); CA Assembly Bill 52 (AB 52, 2014); Phase I/II Cultural Resources Assessment Update for the TR38605 Project (BFSA, 2023a)

Findings of Fact:

a) Tribal Cultural Resources are those resources with inherent tribal values that are difficult to identify through the same means as archaeological resources. These resources can be identified and understood through direct consultation with the tribes who attach tribal value to the resource. Tribal cultural resources may include Native American archaeological sites, but they may also include other types of resources such as cultural landscapes or sacred places. The appropriate treatment of tribal cultural resources is determined through consultation with tribes. In compliance with Assembly Bill 52 (AB52), notices regarding this project were mailed to all requesting tribes.

After consultation the Pechanga Band of Indians and the Soboba Band of Luiseno Indians requested that a Native American monitor be present during ground disturbing activities so any unanticipated finds will be handled in a timely and culturally appropriate manner.

A Phase I/II Cultural Resource Investigation Report was conducted for the proposed Project site. The Phase I and II Cultural Resources Survey identified two prehistoric archaeological sites at the Project site, which include one prehistoric quartz lithic artifact scatters (P-33-26654/RIV-12553) and one (1) bedrock milling feature site (P-33-26658/RIV-12,557). Due to a lack of unique elements, minimal research potential, and based on the criteria listed in CEQA Guidelines § 15064.5, it is likely the two (2) sites do not comprise significant pre-historic archeological resources. However, with the sites being documented cultural resources all attempts to avoid and protect should be implemented, therefore with the implementation of **Mitigation Measure CUL-1** for the avoidance and relocation of these identified resources the impacts would be less than significant

Although no known other significant archaeological resource sites would be impacted by the Project, there is a possibility that archaeological resources may be present beneath the site's subsurface, and may

be impacted by future ground-disturbing construction activities associated with the Project. Due to the potential to discover significant archaeological resources within the Project boundaries, which could be significantly impacted if not properly identified and treated, a potentially significant impact to subsurface prehistoric resources would occur, however with the implementation of **Mitigation Measure CUL-1** the impacts would be less than significant.

b) In compliance with Assembly Bill 52 (AB52), notices regarding this project were mailed to all requesting tribes. Consultation with the Pechanga Band of Indians and the Soboba Band of Luiseno Indians occurred, including a site investigation with the Lead Agency and the consulting tribes. Upon conclusion of the site investigation the consulting tribes identified two prehistoric archaeological sites at the Project site, which include one prehistoric quartz lithic artifact scatters (P-33-26654/RIV-12553) and one (1) bedrock milling feature site (P-33-26658/RIV-12,557). Discussion with the requesting tribes and Lead Agency set forth all attempts to avoid and protect the cultural resources should be implemented. It should be noted that due physical constraints associated with the prehistoric quartz lithic artifact scatters (P-33-26654/RIV-12553) full avoidance would be impractical, and therefore prior to the disturbance of the prehistoric quartz lithic artifact scatters, any identified significant cultural resources by the consulting tribes during monitoring would be subject to relocation. Therefore, with the implementation of **Mitigation Measure CUL-1** for the avoidance and relocation of these identified resources the impacts would be less than significant.

Tribal Cultural Resources are those resources with inherent tribal values that are difficult to identify through the same means as archaeological resources. These resources can be identified and understood through direct consultation with the tribes who attach tribal value to the resource. Tribal cultural resources may include Native American archaeological sites, but they may also include other types of resources such as cultural landscapes or sacred places. The appropriate treatment of tribal cultural resources is determined through consultation with tribes.

In compliance with Assembly Bill 52 (AB52), notices regarding this project were mailed to all requesting tribes on June 05, 2023. No response was received from the Santa Rosa Band of Cahuilla Indians, Ramona Band of Cahuilla Mission Indians, Pala Band of Mission Indians, Quechan Indian Nation, Agua Caliente Band of Cahuilla Indians, Cahuilla Band of Indians or the Colorado River Indian Tribe.

The Rincon Band of Luiseno Indians responded in a letter dated June 20, 2023. The letter stated, "…the Rincon Band of Luiseño Indians ("Rincon Band" or "Tribe"), a federally recognized Indian Tribe and sovereign government. We have received your notification regarding the above-mentioned project. The identified location is within the Traditional Use Area (TUA) of the Luiseño people. As such, the Rincon Band is traditionally and culturally affiliated to the project area. We kindly ask to be provided with copies of existing documents pertaining to the project such as the cultural survey including the archaeological site records, shape files, archaeological record search results, geotechnical report, and the grading plans. Upon receipt and review, the Rincon Band will determine if AB52 consultation is needed.

Planning provided the cultural report and the project conditions of approval on July 05, 2023. This project was discussed during a meeting held on August 30, 2023. No specific impacts to Tribal Cultural Resources were identified by Rincon. Consultation was concluded by Rincon on September 01, 2023.

The Soboba Band of Luiseno Indians responded in a letter dated June 06, 2023, requesting consultation. Project documents were provided to the tribe on June 19, 2023. This project was discussed during a

meeting held on February 14, 2024. Follow-up emails were sent on February 15, 2024, and May 14, 2024. Consultation was concluded on September 6, 2024.

The Pechanga Band of Mission Indians responded in an emailed letter dated June 27, 2023, requesting consultation. In the letter the Pechanga Tribe told Planning that "the Project area is part of 'Ataaxum (Luisefio), and therefore the Tribe's, aboriginal territory as evidenced by the existence of cultural resources, named places, t6ota yixelval (rock art, pictographs, petroglyphs), and an extensive 'Ataaxum artifact record in the vicinity of the Project. This culturally sensitive area is affiliated with the Pechanga Band of Luisefio Indians because of the Tribe's cultural ties to this area as well as our extensive history with the County and other projects within the area". Project documents were provided to the tribe on June 27, 2023, with an offer to meet to discuss the project. A follow up email was sent to the tribe on November 15,2023. This project was discussed during a meeting held on February 21, 2024, and a site visit was made by Planning and Pechanga on April 24, 2024. During consultation Pechanga provided information that the project was within a landscape identified for an adjacent project. The tribe considers the bedrock milling features situated on the current project to be contributors to the landscape. Because the features will be avoided by project design and will be in an open space area protected from impacts in the future there would not be a physical impact to the features. Consultation was concluded on September 9, 2024.

The consulting tribes expressed concerns that the project has the potential for as yet unidentified subsurface tribal cultural resources. The tribes request that a Native American monitor be present during ground disturbing activities so any unanticipated finds will be handled in a timely and culturally appropriate manner.

The project will be required to adhere to State Health and Safety Code Section 7050.5 in the event that human remains are encountered and by ensuring that no further disturbance occur until the County Coroner has made the necessary findings as to origin of the remains. Furthermore, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made.

CEQA also requires the Lead Agency to address any unanticipated cultural resources discoveries during Project construction. Therefore, a condition of approval that dictates the procedures to be followed should any unanticipated cultural resources be identified during ground disturbing activities has been placed on this project.

With the inclusion of the **Mitigation Measure TCR-01 through TCR-03**, as shown below, impacts to any as yet unidentified resources would be mitigated to a level less than significant.

Mitigation:

See **Mitigation Measure CUL-1** outlined within Section 9, "Archaeological Resources". In additional to cultural resource monitoring during construction by a qualified archaeologist , the developer shall provide for a representative of both the Pechanga Band of Indians and the Soboba Band of Luiseno Indians to be present and monitor for any known and potential cultural resources during any native ground disturbances.

The following **TCR Mitigation Measures** are required:

TCR-01 - Planning-CUL. 1 Human Remains
If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5.Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "Most Likely Descendant". The Most Likely Descendant shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

TCR-02 - Planning-CUL. 3 Unanticipated Resource
The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed:

- All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the applicant shall call the County Archaeologist immediately upon discovery of the cultural resource.

- A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis.

- Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.

* A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other.

** If not already employed by the project developer, a County approved archaeologist shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary.

TCR-03 - 060 - Planning-CUL. 3 Native American Monitor
Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American Monitor(s). In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an

adequate number of Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources.

Activities will be documented in Tribal Monitoring Notes which will be required to be submitted to the County Archaeologist prior to grading final inspection. The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.

Monitoring:

A representative from Pechanga Band of Indians and the Soboba Band of Luiseno Indians will be retained under contract and will provide for any monitoring during construction deemed necessary as identified during the AB523 Tribal Consultation, any unanticipated finds will be handled in a timely and culturally appropriate manner.

UTILITIES AND SERVICE SYSTEMS Would the project:				
40. Water a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐

Source(s): Western Municipal Water District – 2015 Urban Water Management Plan (WMWD, 2015); Project Application Materials, Western Municipal Water District – Water and Sewer Availability Letter (WMWD, 2023); WMWD System Analysis Greentree Ranch Analysis (Adkan, 2023d)

Findings of Fact:

a) The Project proposes a number of improvements to provide potable and non-potable water service to the site. Environmental impacts associated with the construction of these proposed facilities have been evaluated throughout this initial study (e.g., air quality, biological resources, greenhouse gases, noise, etc.), and where impacts have been identified mitigation is proposed, where feasible, to reduce potential impacts to the greatest possible extent. Accordingly, the discussion in the following analysis focuses on whether the proposed Project would result in or require new or expanded water treatment facilities, and whether the Project would result in a need for new or expanded entitlements for water supply.

WMWD is responsible for supplying the region with its potable and non-potable water needs. As discussed in WMWD's UWMP, adequate water supplies are projected to be available to meet estimated water demand until at least the Year 2040 in all types of climate conditions, including normal, dry, and multiple dry-weather years. WMWD forecasts for projected water demand are based on the adopted land use

designations contained within the general plans for the respective cities and unincorporated areas of Riverside County contained within the WMWD's service area. Under existing conditions, the Project site is planned for development with up to 163 residential dwelling units by the Riverside County General Plan, and development of the site has therefore been previously assumed by the WMWD in its projects of future water supply and demand.

To assess the ultimate effect of the Project's water demands and service needs, Adkan Engineers has prepared a water analysis for the proposed Project. The water analysis has determined that adequate water supplies, sufficient flow rates and minimum pressures are available to service the proposed development. The water system analysis was also performed to establish the water system infrastructure improvements required to provide service to the Project. The backbone onsite and off-site recommended water system improvements have been established based on the WMWD North and South AFC Water Master Plan criteria (WMWD, 2015).

The water system was analyzed for the peak hour demand verifying the flow at each location is a minimum of 40 PSI and a maximum of 120 PSI. A minimum of 40 psi pressure for peak hour demand flow is established at the location of the meter using the pad elevation of the water tank, at half full, as the starting hydraulic grade line. Fire hydrants are to be verified at a minimum of 20 PSI The system has also been analyzed for the maximum day demand plus fire flow at the worst-case scenario (highest and furthest fire hydrant located from the distribution source) verifying the pressure at each location is a minimum of 20 PSI and maximum velocity being 7.5 feet per second. (Adkan, 2023d, pp.11)

A hydraulic model was set up to analyze the 1515 Pressure Zone system, this zone will serve the entire project. The supply for this zone originates from the existing offsite 1515 Zone Reservoir. The project will be supplied by the connection and extension of the 18" the transmission line within El Sobrante Avenue, currently being extended easterly by the adjacent development, Tract 36730. (Adkan, 2023d, pp.12)

Based on data provided by WMWD, the 1515 Zone reservoir is constructed at a Pad Elevation of 1468. For the purposes of this analysis, an available gradeline of 1,483 feet at the point of connection was assumed during average day demands and during peak hour and fire flow scenarios. This represents a tank operating at half-full as the La Sierra tank has a vertical capacity of 30 feet. The existing 18" transmission line within El Sobrante Avenue was modeled as a source of flow from the 1515 La Sierra tank. (Adkan, 2023d, pp.12)

The computer modeling output in the water system analysis verifies that the proposed infrastructure as part of the Project is adequate to meet all demand conditions considered and that sufficient flow rates and minimum pressures can be achieved, the minimum static pressure analyzing Peak Hour Demand (PHD) being 40.38PSI at a pad elevation of 1376.00, and the Minimum Maximum Day Demand plus Fire Flow (MDD+FF) at the highest possible fire hydrant location being 24.95 PSI at an elevation of 1389.00. (Adkan, 2023d)

Accordingly, sufficient water infrastructure is available to serve the Project and implementation of the Project would not require any new or expanded water entitlements outside of those analyzed as part of the Project. The Project also would not require new or expanded water treatment facilities. Accordingly, impacts due to the need for new or expanded water treatment facilities would be less than significant. Additionally, because no new or expanded entitlements would be needed, impacts due to the

construction or expansion of existing entitlements and resources also would be less than significant. (WMWD, 2016a, pp. 52-53)

b) As discussed within Section 40(a) "Water", above, the 1515 Pressure Zone system will serve the entire Project site. The existing 1515 Pressure Zone is supplied by the La Sierra 10 MG reservoir. Based on information provided by WMWD, Table 40.1 below provides a calculation to evaluate the ability of the La Sierra tank to meet the storage needs of existing and near-term developments. As shown, there is approximately 6.1 MG of surplus storage, assuming existing development plus all known near-term buildout of adjacent Tracts 36390, 36730, and 36475. Thus, there is adequate existing storage and supply to serve the proposed Project. Accordingly, sufficient water supplies are available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years, and would be a less than significant.

Table 40.1 – 1515 Pressure Zone Capacity Analysis

1515 Zone Development Summary

Description	Units
Existing Service Area as of 2016[1]	2862
Final Tract 36390 (Citrus Heights) - Completed Community	282
Final Tract 36475 (Tramonte) - Completed Community	171
Tract 36730 (Highland Grove 1) - Partially Completed Community	272
Tract 38605 (Greentree) - Proposed Community	163
Tentative Tract No. 38910 (Highland Grove 2) – Future Community	128
Tentative Tract No. 38927 (Willow Creek)) – Future Community	206
Total 1515 PZ Units	4,084

[1] Based on information provided by Albert A. Webb Associates, 2016

Proposed Demand Projections by Unit

Average Day Demand, (gpd)	4,655,760	Based on 1,140gpd/unit
Maximum Day Demand, (gpd)	8,147,580	Based on 1.75xADD

1515 Pressure Zone Storage Summary

Required Equalizing Storage, MG	2.04	0.25 x MDD
Required Emergency Storage, MG	4.08	0.50 x MDD
Fire Flow, MG	0.30	1500 gpm at 2 hours
Total Storage, MG	6.42	

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
41. Sewer a) Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☒	☐
b) Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Source(s): Western Municipal Water District – 2015 Urban Water Management Plan (WMWD, 2015); Project Application Materials, Western Municipal Water District – Water and Sewer Availability Letter (WMWD, 2023); El Sobrante Property Assemblage WMWD Sewer Analysis (Adkan, 2023c)

Findings of Fact:

a) The Project proposes a number of improvements to provide sewer services to the site. Impacts associated with the construction of the proposed on-site sewer facilities are evaluated throughout this initial study, and mitigation has been provided to reduce such effects to the maximum feasible extent. Therefore, the Project's proposal to construct new sewer facilities would not result in any impacts to the environment that are not already addressed by this Initial Study. Accordingly, the discussion and analysis below focuses on whether the Project would result in or require new or expanded wastewater treatment facilities that could result in significant environmental effects, as well as an analysis of whether WMWD has adequate capacity to serve the Project's projected demand in addition to WMWD's existing commitments.

Wastewater generated by the proposed Project would be treated by the WRCRWTP. The WRCRWTP currently has a total treatment capacity of 8 mgd, and the WMWD currently has capacity rights of 1.93 mgd. The WRCRWTP treated 936 AFY (approximately 835,607 gpd) of wastewater from the WMWD in 2015. Therefore, the remaining existing WMWD capacity of the WRCRWTP is estimated to be approximately 1,064,393 gpd, or 1.06 mgd (equal to the difference between the existing treatment capacity rights of 1.93 mgd and the 835,607 gpd of wastewater treatment at the facility in 2015).

The Project Wastewater Generation, the proposed Project would generate an average of 32,600 gpd of wastewater requiring treatment at the WRCRWTP. In order to convert the average wastewater flows to peak wet weather flows, a WMWF peaking factor of 1.62 was utilized, resulting in a worst- case maximum Project generation of 52,812 gpd of wastewater requiring treatment at the WRCRWTP. Therefore, using the existing available 2015 capacity for WRCRWTP, the treatment plant would have a worst- case remaining available capacity for sewer treatment of approximately 1,007,188 gpd after implementation of the proposed Project (equal to the difference between the existing remaining treatment capacity rights [1.06 mgd] and the maximum peak wastewater demand generated by the Project [52,812 gpd]). Thus, because the existing WMWD capacity entitlements at the WRCRWTP facility are adequate to serve the proposed Project, the Project would not result in or require the need for new or expanded wastewater treatment facilities that could result in significant environmental effects. Furthermore, because traditional sewer facilities are available and the project has the ability to flow via gravity to the treatment facility, septic facilities are not being considered as part of the Project, further contributing to a less than significant impact. (Adkan, 2023c, p. 8-9)

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

b) As discussed within Section 41(a) "Sewer", above, the Project has resulted in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Using the existing available 2015 capacity for WRCRWTP, the treatment plant would have a surplus of remaining available capacity for sewer treatment of approximately 1,007,188 gpd after implementation of the proposed Project. Thus, given the remaining available capacity for sewer treatment after implementation of the proposed Project any impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

42. Solid Waste a) Generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
b) Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?	☐	☐	☒	☐

Source(s): Project Application Materials; Riverside County General Plan EIR No. 441 – Public Facilities (Riverside County, 2020b); Riverside County Countywide Integrated Waste Management Plan (Riverside County, 1996); Waste Management Will Serve Letter (WM, 2023)

Findings of Fact:

a) As shown below in Table 42.1, Project Solid Waste Generation, buildout and occupancy of the Project is estimated to produce approximately 66.83 tons of solid waste per year, which represents approximately 0.18 tons per day. Per the Riverside Countywide Integrated Waste Management Plan (CIWMP), up to 50 percent of its solid waste would need to be diverted from area landfills. In conformance with the CIWMP, the Project Applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes. Solid waste generated by the Project would be transported to one of two (2) local solid waste transfer facilities, the MVTS and/or PTS. At full buildout, waste generated by the Project would represent approximately 0.009 percent of the permitted daily capacity at the MVTS (2,000 tpd) and 0.006 percent of the permitted daily capacity at the PTS (3,000 tpd). Given the estimated volume of solid waste generated by the Project on a daily basis during the buildout condition, it is anticipated that the MVTS and/or the PTS would have sufficient capacity to accept solid waste to be disposed by the proposed Project. As noted above, the CIWMP would require that up to 50 percent of the solid waste be diverted from area landfills, which would further ensure the Project's solid waste generation does not exceed available landfill capacity, thereby having a less than significant impact.

Table 42.1 – Project Solid Waste Generation

Land Use	Units/Acreage	Wastewater Generation Rate	Total Wastewater Generated	Average Solid Waste per Day
Residential	163 DU	0.41 tons/unit/yr	66.83 tons/yr	0.18 tons/day

b) The proposed Project would be regulated by the RCDWR and would be required to comply with the CIWMP's requirement to divert up to 50 percent of its solid waste from area landfills. In conformance with the CIWMP, the Project Applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes. Implementation of a waste disposal strategy for the proposed Project would assist Riverside County in achieving the mandated goals of the Integrated Waste Management Act by developing feasible waste programs that encourage source reduction, recycling, and composting. The RCDWR is specifically charged with the responsibility of implementing programs that ensure that unincorporated Riverside County achieves 50% diversion of solid waste from landfill disposal as well as monitoring and reporting unincorporated Riverside County's compliance with CIWMB and AB 939. With mandatory compliance to AB 939, AB 341, and RCDWR's programs and policies, the Project would not result in a significant impact due to noncompliance with regulations related to solid waste. A less-than-significant impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

43. Utilities

Would the project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?

a) Electricity?	☐	☐	☒	☐
b) Natural gas?	☐	☐	☒	☐
c) Communications systems?	☐	☐	☒	☐
d) Street lighting?	☐	☐	☒	☐
e) Maintenance of public facilities, including roads?	☐	☐	☒	☐
f) Other governmental services?	☐	☐	☒	☐

Source(s): Project Application Materials, Utility Service Providers, Riverside County Ordinance No 460 (Riverside County, 2023); Riverside County Ordinance No. 460 (Riverside County, 2023)

Findings of Fact:

a) Electric service is currently available to the proposed Project site through Southern California Edison, although existing facilities would need to be expanded as necessary to provide service to the Project's planned 163 residential dwelling units. However, several existing transmission lines occur adjacent to the western boundary of the site (along McAllister Road), and adjacent to the northeastern boundary of the site (along Blackburn Road); therefore, the construction of electricity facilities as necessary to serve the

proposed Project would occur within the on-site areas already planned for impact by the Project. Therefore, the construction of electrical facilities necessary to serve the proposed Project would not result in a less than significant impact to the environment.

b) There are no anticipated capacity restrictions which could limit the ability of the Southern California Gas Company to provide service to the proposed Project. Points of connection to Southern California Gas main lines would be resolved as the proposed Project and other projects planned for the area commence their utility design and interconnection plans. It is anticipated that construction of any off-site natural gas utility connections would occur within existing disturbed public rights-of-way. As such, the construction of these utility connections would not result in a less than significant impact to the environment. Furthermore, the use of natural gas will be prohibited by 2026 California Building Code, and may not be utilized at the time of construction subject to project timing, further reducing any impacts.

c) Points of connection to AT&T communication facilities would be resolved as the proposed Project and other projects planned for the area commence their utility design and interconnection plans. It is anticipated that any off-site construction of communication utility connections would occur within existing disturbed public rights-of-way. As such, the construction of communication utility connections is evaluated under the appropriate subject headings within this Initial Study. No environmental impacts would occur from the provision of these utilities, as all lines would be installed within the disturbance areas of existing roadway rights-of-way.

d) The Project would provide street lighting as required by the County in accordance with Ordinance No. 461 (Roadway Standards) and Ordinance No. 460 (Subdivision of the Land). All physical environmental impacts associated with street lighting and maintenance would occur within the boundaries of the Project site and off- site improvement areas, the impacts of which are described throughout this Initial Study. Therefore, no new impacts to the environment would occur, and street lighting would result in a less than significant impact to the environment.

e) Implementation of the proposed Project would result in the establishment of new public roadways within the Project site that would require maintenance by the County. Maintenance of the public roadways within the proposed Project would not result in any significant impacts to the environment. Impacts associated with the physical construction of these roadways already are evaluated in appropriate sections of this Initial Study, and any identified impacts have been mitigated to the maximum feasible extent. Maintenance of the major roadway facilities within the Project site would be funded through the Project developer's payment of Development Impact Fees (DIF) and future Project residents' payment of property taxes. Therefore, the maintenance of roadways proposed by the Project would not result in any new impacts to the environment beyond that which is already disclosed and mitigated by this Initial Study, and a less-than-significant impact would occur.

f) Based on the foregoing analysis, impacts associated with the construction or expansion of other governmental or municipal utilities would be less than significant or otherwise mitigated to the maximum feasible extent by this Initial Study. No additional mitigation would be required and impacts would be less than significant.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Monitoring: No monitoring is required.

WILDFIRE If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the project:				
44. Wildfire Impacts a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐
e) Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☒	☐	☐

Source(s): Riverside County General Plan Figure S-11 "Wildfire Susceptibility" (Riverside County, 2020a), Riverside County Information Technology – Map My County (RCIT, 2023); Fire Behavior Report Tentative Tract 38605 (Firesafe, 2024); Project Application Materials

Findings of Fact:

a) The Riverside County Sheriff's Department, California Highway Patrol, and other cooperating fire service providers such as County of Riverside Fire Dept and Cal Fire have primary responsibility for evacuations. These agencies work together to assess fire behavior and spread, which ultimately influence evacuation decisions. Evacuation routes are generally identified by fire protection and law enforcement personnel, are determined based on the location and extent of the incident and include as many predesignated transportation routes as possible. The Project is served by an existing surrounding circulation system that provides access to the Project Site and facilitates vehicular circulation throughout the project area in accordance with Riverside County standards. Depending on the nature of the emergency requiring evacuation, it is anticipated that the majority of the Project residents would exit the Project area via the existing surrounding roadway circulation system. Project implementation would not impair access to these roadways should an evacuation be required. Furthermore, the project when completed will provide for an additional means of access into the existing community to the North from El Sobrante Road improving the existing modes for emergency evacuation and emergency response.

Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and will improve response routes to the northerly community. Impacts will be less than significant.

b) State law requires development in State Responsibility Area (SRA) within any fire hazard zone to comply with the WUI (Wildland Urban Interface) codes contained in the California Residential Code (Chapter 3, Section R337), California Building Code (Chapter 7A) and California Fire Code (Chapter 49).

The Project site is located completely in a Moderate Fire Hazard Severity Zone on the current map (adopted in 2007) and mostly in Moderate for the proposed hazard map, circulated for public comment in 2023. All portions of the site are within a hazard zone and required to comply with the WUI codes cited above.

A fire behavior analysis was completed by Firesafe Planning Solutions predicting wildland fire behavior. The fire behavior analysis includes the analysis of Fuels, Slope Height, Slope Ration, Slope Aspect, Wind Patterns and Weather Inputs. Based on the fire behavior analysis on a "worst-case" scenario the maximum flame length of 40 (39.4) feet is possible at the head of the fire when the fire is running directly upslope with a continuous fuel bed that is consistent enough to produce a self-sustaining, self-propagating fire. (Firesafe, 2024, p. 25)

The Public Resources Code (PRC) Section requires all areas with the development have a minimum defensible space of that begins with the structure and moves outward to a minimum distance of 100 feet or to the property line. Fuel Modification is a part of this defensible space. (Firesafe, 2024, p. 41)

The fire behavior analysis concluded that all modeling of the Project can achieve a minimum of 100 feet defensible distance without mitigation and has a less than significant impact with the exception of the following lots that do not have the minimum 100 feet defensible distance required by the PRC and will require additional mitigation to achieve the "same practical effect" as the 100 feet required:

- Lots 1, 14, and 15
- Lots 19-32
- Lots 33 and 34
- Lots 100-115 (Except Lot 112)

Firesafe Planning Solution modeled each of these specific locations individually changing their modeling inputs to reflect the unique characteristics of Fuels, Slope Height, Slope Ration, Slope Aspect, Wind Patterns and Weather Inputs to establish the mitigation necessary to achieve the "same practical effect".

<u>Lots 1, 14 and 15</u>
The area north of Lots 1, 14 and 15 has a large riparian area which will remain unmanaged and contains California Sage Scrub and will likely remain in this condition. While the project will remove the palm trees and pampas grass within the riparian areas, native species will not be abated in any fashion. Aligned with the NE and NNE wind, this fuel is below the project site building pads. It is possible to have a fire burn the entire 350 foot of fuel prior to impacting these three lots. (Firesafe, 2024, p. 34)

The only change in the inputs for the model is the slope, which was reduced from 50% to 20% to reflect the actual location conditions. This resulted in the maximum Flame Length (FL) being reduced from 39.4 to 38.2, the Fireline Intensity (FI) calculating out at 54,084 kW/m and the Rate of Spread (ROS) being 229.1 feet per minute. A Radiant Heat Value of under 10 kW/m is achieved at a distance of 75 feet. (Firesafe, 2024, p. 34)

In order to protect these three lots, a combined distance of 75 feet (Zone 1 entirely) on and off the lot will be needed. The Lots will need to be deed-restricted for "no combustible construction" within this distance (75 feet). A radiant heat wall will be required at the top of the slope on the lots. (Firesafe, 2024, p. 34)

With the implementation of **Mitigation Measure WILDEFIRE-1** the impacts to Lots 1, 14 and 15 will be less than significant.

Lots 19-32

The riparian north and east of Lots 19 through 32 is comprised of a single drainage with riparian at the bottom of the flowline. This unmanaged area varies from 75 feet to just over 200 feet in width but is generally 100 to 150 feet in width, with a significant change in elevation from the rim to the bottom and back up to the development on the opposite side. This area is connected to larger wildland areas only at the ends and not in the direction of the onshore or offshore winds. (Firesafe, 2024, p. 36)

Due to the limited amount of fuel in this area, a fire with a 40-foot flame length is simply not possible in the direction of the project site. It could occur running parallel to the project site but not in the direction of the project site. The reason for this is that a fire cannot burn into this area as an established "line of fire" but instead must burn from the ends or a fire must start from an ember or brand that land in a receptive fuel bed and accelerates to a fire burning in equilibrium to achieve a maximum flame length. Because of this factor, the area simply does not have the quantity of fuel necessary to accelerate and burn to the maximum flame length modeled in the Behave assumptions for this site. Therefore, in order to protect these lots a radiant heat wall will be required at the top of the slope on the lots. (Firesafe, 2024, p. 36)

With the implementation of **Mitigation Measure WILDEFIRE-1** the impacts to Lots 19-32 will be less than significant.

Lots 33 and 34

Lots 33 and 34 are more problematic in that they do have a large upwind riparian area, and they also have less fuel modification area available between the lot and the riparian. On these two lots, the distance will need to be provided on the lot (similar to Lot 1) OR a physical barrier will need to be provided to shield the proposed structure from the fire OR a combination of the two approaches. (Firesafe, 2024, p. 38)

There are three options for achieving this protection. The first option is to manage the slope and distance to achieve the desired heat shield using a radiant heat wall at the top of the slope. Option 2 restricts the height of the proposed structure when the slope is not steep enough to provide the needed difference in elevation to allow the radiant heat wall to function as intended. Option 3 utilizes a boulder wall or second radiant heat wall to create the heat shield needed for shorter distances or when the slope cannot be used effectively. (Firesafe, 2024, p. 38)

All three approaches are valid and can be used in combination to achieve the needed results. Details will need to be provided in the Final/Precise Fuel Modification Plan that justifies the alternative selected for each of the two lots when the details regarding the building footprints and building profiles are known. (Firesafe, 2024, p. 38)

With the implementation of **Mitigation Measure WILDEFIRE-1** the impacts to Lots 33 and 34 will be less than significant.

Lots 100-115 (Except Lot 112)

Lots 100 through 115 (except Lot 112) will need to have a distance of 65 feet from the native fuels to the structures. This is two times the maximum flame length of the fuel (32.5 feet) with an onshore wind at 30 mph. These lots will have a radiant heat wall at the top of the slope, and Zone 2 areas do not have to be irrigated, but the Zone 1 areas will need to be extended to the radiant heat wall or 30 feet, whichever is greater. If the slope areas of these lots are to be irrigated, they must conform to the spacing and thinning requirements of the fuel modification guideline. Lot 112 is not included as it does not have an interface issue. The Zone 1 standards can be extended to the entire fuel modification zone without issue. (Firesafe, 2024, p. 40)

With the implementation of **Mitigation Measure WILDEFIRE-1** the impacts to Lots 33 and 34 will be less than significant.

c) A fire behavior analysis was completed by Firesafe Planning Solutions predicting wildland fire behavior. The fire behavior analysis includes the analysis of Fuels, Slope Height, Slope Ration, Slope Aspect, Wind Patterns and Weather Inputs. Based on the fire behavior analysis on a "worst-case" scenario the maximum flame length of 40 (39.4) feet is possible at the head of the fire when the fire is running directly upslope with a continuous fuel bed that is consistent enough to produce a self-sustaining, self-propagating fire. (Firesafe, 2024, p. 25)

The fire behavior analysis concluded that with the exception of several lots, the Project can achieve a minimum of 100 feet distance without mitigation and has a less than significant impact. However, the following lots would require the installation and maintenance of Radiant Heat Walls, Irrigated Landscape Areas, and Fuel Modification Areas to achieve the "same practical effect" as the 100 feet minimum defensible space as required by the PRC.

- Lots 1, 14, and 15
- Lots 19-32
- Lots 33 and 34
- Lots 100-115 (Except Lot 112)

Refer to the discussion in Section 44(b) "Wildfire", above.

Therefore, with the implementation of **Mitigation Measure WILDEFIRE-1** the impacts will be less than significant.

d) The topography of the project is such that the project is lying between two drainage courses, one drainage course along the northerly boundary and one drainage course along the southerly boundary. The project site is higher in elevation than the two drainage courses, and any run-on flows are contained within the surrounding drainage courses. The drainage courses are well defined an exhibit in most cases exposed granitic bedrock and outcroppings. The ridgeline of the project, where most of the slopes are located, is composed mostly of granitic rock that is not susceptible to landslides, mudflow and post-fire instability. Additionally, the slopes surrounding and tributaffry to the structures within the Project are part of the defensible areas as determined by the fire behavior analysis and will be required to be irrigated and landscaped and not susceptible to wildfire damage. Accordingly, the impacts will be less than significant.

e) A fire behavior analysis was completed by Firesafe Planning Solutions predicting wildland fire behavior. The fire behavior analysis includes the analysis of Fuels, Slope Height, Slope Ration, Slope Aspect, Wind Patterns and Weather Inputs. Based on the fire behavior analysis on a "worst-case" scenario the maximum flame length of 40 (39.4) feet is possible at the head of the fire when the fire is running directly upslope with a continuous fuel bed that is consistent enough to produce a self-sustaining, self-propagating fire. (Firesafe, 2024, p. 25)

The fire behavior analysis concluded that with the exception of several lots, the Project can achieve a minimum of 100 feet distance without mitigation and has a less than significant impact. However, the following lots without mitigation to achieve the "same practical effect" as the 100 feet minimum defensible space as required by the PRC could potentially expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires:

- Lots 1, 14, and 15
- Lots 19-32
- Lots 33 and 34
- Lots 100-115 (Except Lot 112)

Refer to the discussion in Section 44(b) "Wildfire", above.

Therefore, with the implementation of **Mitigation Measure WILDEFIRE-1** the impacts will be less than significant.

Mitigation: The following **WILDFIRE Mitigation Measures** are required:

WILDFIRE-1

The developer shall prepare a Final/Precise Fuel Modification Plan for the following lots that do not meet the minimum 100 feet defensible distance to the structure as required by the PRC in accordance with the Fuel Behavior Analysis prepared by Firesafe Planning Solutions (Firesafe, 2024):

- Lots 1, 14, and 15
- Lots 19-32
- Lots 33 and 34
- Lots 100-115 (Except Lot 112)

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The Final/Precise Fuel Modification Plan shall outline the specific recommended methods to achieve the "same practical effect" as the minimum 100 feet required by the PRC, including but not limited to, the use of radiant heat walls, irrigated landscaping buffers, deed restrictions for combustible structure setbacks or building heights, boulder walls, or maintaining a minimum 100 feet defensible distance.

These recommended methods shall be incorporated into the final engineering and construction drawings prior to the issuance of building permits.

Monitoring:

A qualified Fire Protection Analyst shall be retained under contract for the preparation of a Final/Precise Fuel Modification Plan. The Final/Precise Fuel Modification Plan will be reviewed and approved by the Riverside County Fire Department. A copy of the approved Final/Precise Fuel Modification Plan shall be submitted concurrently with review of the final engineering and construction plans for confirmation of the implementation of the recommendations outlined within the Final/Precise Fuel Modification Plan prior to plan approval and building permit issuance.

MANDATORY FINDINGS OF SIGNIFICANCE Does the Project:				
45. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒

Source(s): Staff Review; Project Application Materials

Findings of Fact: Implementation of the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Accordingly, no impact would occur.

46. Have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects and probable future projects)?	☐	☐	☐	☒

Source(s): Staff Review; Project Application Materials

Findings of Fact: The Project does not have impacts which are individually limited, but cumulatively considerable. As demonstrated in each subsection of this Environmental Assessment, in particular regarding air quality and greenhouse gas emissions that have established thresholds to consider cumulative impacts as well

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

as traffic impacts that consider the existing and currently planned near term development of the area and the specific respective traffic impacts to the overall area in a cumulative manner, no significant impacts were identified. As illustrated in the Environmental Assessment, the Project will not have any impacts that cannot be reduced to less than significant with the incorporation of mitigation, Project design features, and/or conditions of approval. This Project is consistent with the County wide General Plan Land Use designation for the area and is consistent with the per the LMWAP El Sobrante Policy Areas. Accordingly, no cumulatively considerable impacts would occur.

47. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Source(s): Staff Review; Project Application Materials

Findings of Fact: The proposed project would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Accordingly, no impact would occur.

VII. EARLIER ANALYSES

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration as per California Code of Regulations, Section 15063 (c) (3) (D). In this case, a brief discussion should identify the following:

Earlier Analyses Used, if any: None

Location Where Earlier Analyses, if used, are available for review:

Location: County of Riverside Planning Department
4080 Lemon Street 12th Floor
Riverside, CA 92501

VIII. References

The following information sources were used during the preparation of this environmental assessment:

AB 52, 2014 — State of California, 2014. *Assembly Bill 52, Public Availability*

Adkan, 2023 — Adkan Engineers, 2023. *Site photography and reconnaissance during August, 2023*

Adkan, 2023a — Adkan Engineers, 2023. *Preliminary Hydrology Study Tentative Tract 38605, (See Appendix "A")*

Adkan, 2023b — Adkan Engineers, 2023. *Site Specific Preliminary Water Quality Management Plan Tract 38605, (See Appendix, "B")*

Adkan, 2023c — Adkan Engineers, 2023. *El Sobrante Property Assemblage WMWD Sewer Analysis, (See Appendix, "C")*

Adkan, 2023d — Adkan Engineers, 2023. *WMWD System Analysis Greentree Ranch – TTM38605, (See Appendix, "S")*

AGS, 2018 — Advanced Geotechnical Solutions, 2018. *Updated Preliminary Geotechnical Report (See Appendix, "D")*

BFSA, 2023a — Brian F. Smith and Associates, *Phase I/II Cultural Resources Assessment Update for the TR38605 Project, (See Appendix "E")*

BFSA 2023b — Brian F. Smith and Associates, *Paleontological Assessment for the TR38605 Project, (See Appendix "F")*

Caltrans, 2019 — California Department of Transportation, 2019. *Scenic Highways Map, Public Availability*

CARB, 2022 — California Air Resources Board. 2022, Designation *maps of California for all Criteria Pollutants that are Designated for the State and National Standards, Public Availability*

CDC, 1991 — California Department of Conservation, 1991. *Mineral Resources Maps for the Temescal Valley, Public Availability*

CDC, 2020 — California Department of Conservation, 2020. *California Important Farmland Series Maps (on-line website), Public Availability*

CDC, 2023 — California Department of Conservation, 2023. *California Williamson Act Enrollment Finder (on-line website), Public Availability*

CDWR, 2023 — California Department of Water Resources, 2023, *Groundwater Basin Maps (on-line website), Public Availability*

City of Riverside, 2021 — City of Riverside, 2021. *City of Riverside General Plan Land Use Element, Public Availability*

DTSC, 2023 — California Department of Toxic Substances Control, 2023. *Envirostor Cleanup Site Map (on-line website), Public Availability*

FEMA, 2008 — Federal Emergency Management Agency, 2008. *FEMA Flood Insurance Rate Map (FIRM) Map No. 06065C1385G, Public Availability*

Firesafe, 2024 — Firesafe Planning Solutions, 2024. *Fire Behavior Report Tentative Tract 38605, (See Appendix "G")*

GeoScience, 2023 — McAllister GeoScience, 2023. *Phase I/II Environmental Site Assessment Update Report, (See Appendix "H")*

GLA, 2023 — Glen Lukos and Associates, 2023. *Jurisdictional Delineation, (See Appendix "I")*

GLA, 2024a — Glen Lukos and Associates, 2024. *Determination of Biologically Equivalent or Superior Preservation Report, (See Appendix "J")*

GLA, 2024b — Glen Lukos and Associates, 2024. *Biological Technical Report, (See Appendix "K")*

Google Earth, 2023 — Google Earth Pro, 2023. *Aerial Imagery for Project Site and Surrounding Areas, Public Availability*

Leighton, 2023 — Leighton, 2023. *Geotechnical Due Diligence Evaluation Proposed Highland Grove III Lake Mathews Area, Riverside County, California, (See Appendix "L")*

NRCS, 2024 — National Resources Conservation Service, *U.S.D.A. Soil Conservation Service Soil Surveys (on-line website), Public Availability*

Project Application Materials, 2023 — Tentative Tract Map 38605*. Project application to the County of Riverside for approval of a Tentative Tract Map, Change of Zone, Agricultural Preserve Notices of Non-Renewal, and Agricultural Preserve Diminishment*

RCIT, 2023 — Riverside County Information Technology, 2023. *Riverside County Geographic Information Systems – Map My County (on-line website)*, *Public Availability*

RCTLMA, 2004 — Riverside County Transportation and Land Management Agency, 2004. *Western Riverside County Multiple Species Habitat Conservation Plan, Public Availability*

RCTLMA, 2023 — Riverside County Transportation and Land Management Agency, 2023.

RCIP Conservation Summary Report Generator, Public Availability

Riverside County, 1996 — Riverside County Department of Waste Resources, 1996. *Riverside County Countywide Integrated Waste Management Plan, Public Availability*

Riverside County, 2014 — Riverside County Transportation and Land Management Agency, 2014. Planning Department, 2020. *Countywide Design Standards and Guidelines, Public Availability*

Riverside County, 2019 — Riverside County Transportation and Land Management Agency, 2019, *Riverside County Climate Action Plan, Public Availability*

Riverside County, 2020a — Riverside County Transportation and Land Management Agency, Planning Department, 2021. *Comprehensive Riverside County General Plan Amendment No. 618, Public Availability*

Riverside County, 2020b — Riverside County Transportation and Land Management Agency, Planning Department, 2021. *Environmental Impact Report No. 441 (SCH No. 2002051143), Public Availability*

Riverside County, 2020c — Riverside County Transportation and Land Management Agency, Planning Department, 2021. *Lake Matthews/Woodcrest Area Plan, Public Availability*

Riverside County, 2023 — Riverside County, 2023. *Riverside County Municipal Code, Public Availability*

RWQCB, 2010 — Regional Water Quality Control Board, 2019. *Order No. R8-2010-0033, Public Availability*

RWQCB, 2019 — Regional Water Quality Control Board, 2019. *SARWQCB Santa Ana Region Basin Plan, Public Availability*

SB 18, 2004 — State of California, 2004. *Senate Bill 18, Public Availability*

SCAQMD, 1976 — South Coast Air Quality Management District, 1976. *SCAQMD Rule 402, Public Availability*

SCAQMD, 2022 — South Coast Air Quality Management District, 2022. *Final 2022 Air Quality Management Plan, Public Availability*

Urban 2023a — Urban Crossroads, 2023. *Greentree (TTM No. 38605) Traffic Analysis, (See Appendix "M")*

Vista Environmental, 2023 — Vista Environmental 2023. *Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis, (See Appendix "N")*

Vista Environmental, 2023a — Vista Environmental 2023. *Noise Impact Analysis, (See Appendix "O")*

Vista Environmental, 2023b — Vista Environmental 2023. *Greenhouse Gas Emissions Memorandum, (See Appendix "P")*

WM, 2023 — Waste Management, 2023. *Solid Waste Will Serve Letter, (See Appendix "Q")*

WMWD, 2015 — Western Municipal Water District, 2015. *2015 Urban Water Management Plan, Public Availability*

WMWD, 2023 — Western Municipal Water District, 2023. *Water and Sewer Will Serve Letter, (See Appendix "R")*